aiwa

aiwa SERVICE

CX-ZL10

SERVICE MANUAL

COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM: TN Z1788-8MA5
- BASIC CD MECHANISM: 4ZG-1 Z3N1BLSHM
- TYPE: U

S/M Code No. 09–98C–322–8T1

ELECTRICAL PARTS LIST-1/4

NOTE: The characters in the suffix column indicate the part usage.

USTM .....XX.....A.....

REF.NO	PARTS NO.	KANRI NO.	DESCRIPTION	SUFFIX
	82-NF7-210-110		GUIDE,FL (*)	A
C 102	87-010-380-080		CAP, ELECT 47-16V	A
C 101	87-018-208-080		CAP 0.047-50F	A
C 204	87-010-408-080		CAP, ELECT 47-50V	A
C 201	87-010-497-080		CAP,E 4.7-35 5L	A
C 202	87-010-497-080		CAP,E 4.7-35 5L	A
C 203	87-010-560-040		CAP,E 10-50 GAS	A
C 207	87-018-208-080		CAP 0.047-50F	A
C 206	87-018-208-080		CAP 0.047-50F	A
C 205	87-018-208-080		CAP 0.047-50F	A
C 211	87-010-248-080		CAP, ELECT 220-10V	A
C 210	87-010-263-080		CAP, ELECT 100-10V	A
C 213	87-010-494-040		CAP,E 1-50 GAS	A
C 215	87-018-125-080		CAP, CER 330P-50V	A
C 214	87-018-131-080		CAP, CER 1000P-50V	A
C 217	87-018-131-080		CAP, CER 1000P-50V	A
C 216	87-018-208-080		CAP 0.047-50F	A
C 212	87-018-209-080		CAP, CER 0.1-50V	A
C 225	87-018-125-080		CAP, CER 330P-50V	A
C 221	87-018-128-080		CAP, CERA-SOL SS 560P	A
C 223	87-018-131-080		CAP, CER 1000P-50V	A
C 226	87-018-208-080		CAP 0.047-50F	A
C 220	87-018-208-080		CAP 0.047-50F	A
C 231	87-010-384-080		CAP, ELECT 100-25V	A
C 241	87-018-117-080		CAP,TC-U 68P-50 SL	A
C 246	87-018-117-080		CAP,TC-U 68P-50 SL	A
C 252	87-010-248-080		CAP, ELECT 220-10V	A
C 282	87-018-125-080		CAP, CER 330P-50V	A
C 281	87-018-125-080		CAP, CER 330P-50V	A
CN 102	87-099-015-010		CONN,13P 6216V	A
CN 101	87-099-720-010		CONN,30P TYK-B(P)	A
D 101	87-020-465-080		DIODE,1SS133 (110MA)	A
D 201	87-017-932-080		ZENER,MTJ6.2B	A
D 205	87-020-465-080		DIODE,1SS133 (110MA)	A
D 203	87-020-465-080		DIODE,1SS133 (110MA)	A
D 202	87-020-465-080		DIODE,1SS133 (110MA)	A
D 211	87-020-465-080		DIODE,1SS133 (110MA)	A
D 216	87-020-465-080		DIODE,1SS133 (110MA)	A
D 215	87-020-465-080		DIODE,1SS133 (110MA)	A
D 218	87-020-465-080		DIODE,1SS133 (110MA)	A
D 214	87-020-465-080		DIODE,1SS133 (110MA)	A
D 219	87-020-465-080		DIODE,1SS133 (110MA)	A
D 217	87-020-465-080		DIODE,1SS133 (110MA)	A
D 213	87-020-465-080		DIODE,1SS133 (110MA)	A
D 212	87-020-465-080		DIODE,1SS133 (110MA)	A
D 221	87-020-465-080		DIODE,1SS133 (110MA)	A
D 222	87-020-465-080		DIODE,1SS133 (110MA)	A
FL 301	8Z-NF9-610-010		FL,SVA-10MS12	A
IC 202	87-A20-914-010		IC,SPS-442-1-F	A
IC 201	8Z-MA5-610-010		C-IC,M38B57MC-XXXFP	A
L 101	87-A50-050-010		COIL,CLK 4.19M(COI)	A
Q 203	87-026-269-080		TR,DTA114ES	A
Q 206	87-026-287-080		TR,DTC143ES	A
Q 201	87-A30-090-080		FET,2SK2541	A
Q 204	87-A30-090-080		FET,2SK2541	A
Q 202	87-A30-090-080		FET,2SK2541	A
Q 205	87-A30-196-080		TR,2SC4115SRS	A
R 302	87-025-424-080		RES,M/F 10K 1/6W F	A
R 301	87-025-424-080		RES,M/F 10K 1/6W F	A
S 101	87-A90-535-010		SW,RTRY EC16B24304	A
S 302	87-A90-095-080		SW,TACT EVQ11G04M	A
S 304	87-A90-095-080		SW,TACT EVQ11G04M	A
S 305	87-A90-095-080		SW,TACT EVQ11G04M	A
S 309	87-A90-095-080		SW,TACT EVQ11G04M	A
S 301	87-A90-095-080		SW,TACT EVQ11G04M	A
S 303	87-A90-095-080		SW,TACT EVQ11G04M	A
S 308	87-A90-095-080		SW,TACT EVQ11G04M	A
S 311	87-A90-095-080		SW,TACT EVQ11G04M	A
S 310	87-A90-095-080		SW,TACT EVQ11G04M	A
S 319	87-A90-095-080		SW,TACT EVQ11G04M	A
S 316	87-A90-095-080		SW,TACT EVQ11G04M	A
S 313	87-A90-095-080		SW,TACT EVQ11G04M	A
S 317	87-A90-095-080		SW,TACT EVQ11G04M	A
S 315	87-A90-095-080		SW,TACT EVQ11G04M	A
S 312	87-A90-095-080		SW,TACT EVQ11G04M	A
S 314	87-A90-095-080		SW,TACT EVQ11G04M	A
S 318	87-A90-095-080		SW,TACT EVQ11G04M	A
S 320	87-A90-095-080		SW,TACT EVQ11G04M	A
S 322	87-A90-095-080		SW,TACT EVQ11G04M	A
S 321	87-A90-095-080		SW,TACT EVQ11G04M	A
SFR 201	87-024-350-080		SFR 2.2K DIA 6H	A
FC 1	87-A90-505-080		FUSE CLAMP,TP00351-51	A
FC 2	87-A90-505-080		FUSE CLAMP,TP00351-51	A
PR 101	87-026-690-080		FUSE,5A 125V 251	A
PR 102	87-026-690-080		FUSE,5A 125V 251	A
T 2	87-A60-317-010		TERMINAL, 1P MSC	A

ELECTRICAL PARTS LIST-2/4

T	1	87-A60-317-010	TERMINAL, 1P MSC	A
WH	101	87-A90-459-010	HLDR,WIRE 2.5-5P	A
C	108	87-010-381-080	CAP, ELECT 330-16V	A
C	107	87-010-384-080	CAP, ELECT 100-25V	A
C	106	87-010-408-080	CAP, ELECT 47-50V	A
C	103	87-016-051-090	CAP,E 2200-35 SMG	A
C	105	87-018-127-080	CAP, CER 470P-50V	A
C	101	87-A10-520-090	CAP,E 3300-35 M SMG	A
C	110	87-010-263-080	CAP, ELECT 100-10V	A
C	112	87-010-263-080	CAP, ELECT 100-10V	A
C	114	87-010-374-080	CAP, ELECT 47-10V	A
C	113	87-010-403-080	CAP, ELECT 3.3-50V	A
C	111	87-010-430-080	CAP, ELECT 100-63	A
C	123	87-010-260-080	CAP, ELECT 47-25V	A
C	122	87-010-260-080	CAP, ELECT 47-25V	A
D	109	87-020-465-080	DIODE,1SS133 (110MA)	A
D	108	87-020-465-080	DIODE,1SS133 (110MA)	A
D	107	87-A40-336-080	ZENER,MTZJ27D T-72	A
D	113	87-020-465-080	DIODE,1SS133 (110MA)	A
D	116	87-070-274-080	DIODE,1N4003 SEM	A
D	117	87-070-274-080	DIODE,1N4003 SEM	A
D	110	87-A40-345-080	ZENER,MTZJ10C	A
D	121	87-A40-535-080	DIODE,1N5393-GOODARK	A
D	122	87-A40-535-080	DIODE,1N5393-GOODARK	A
D	123	87-A40-535-080	DIODE,1N5393-GOODARK	A
D	124	87-A40-535-080	DIODE,1N5393-GOODARK	A
Q	105	87-026-609-080	TR,KTA1266GR	A
Q	108	87-026-609-080	TR,KTA1266GR	A
Q	103	87-026-610-080	TR,KTC3198GR	A
Q	102	87-026-610-080	TR,KTC3198GR	A
Q	106	87-026-610-080	TR,KTC3198GR	A
Q	109	87-026-610-080	TR,KTC3198GR	A
Q	107	87-026-610-080	TR,KTC3198GR	A
Q	104	87-A30-196-080	TR,2SC4115SRS	A
Q	115	87-026-219-080	TR,DTA144ES (0.3W)	A
Q	112	87-026-269-080	TR,DTA114ES	A
Q	113	87-026-609-080	TR,KTA1266GR	A
Q	110	87-026-609-080	TR,KTA1266GR	A
Q	111	89-213-702-010	TR,2SB1370 (1.8W)	A
R	124	87-A00-261-080	RES,M/F 0.56-1W J	A
RY	101	87-A90-464-010	RELAY, DG12D2-O(M)	A
W	101	83-NE2-618-110	F-CABEL,5P-2.5	A
WH	102	87-A90-459-010	HLDR,WIRE 2.5-5P	A
		87-067-584-010	TAPPING SCREW, BVT2+3-6	A
		87-067-703-010	TAPPING SCREW, BVT2+3-10	A
C	207	87-010-546-080	CAP, ELECT 0.33-50V	A
C	208	87-010-546-080	CAP, ELECT 0.33-50V	A
C	209	87-018-133-080	CAPACITOR,CER 4700P-16V	A
C	213	87-010-260-080	CAP, ELECT 47-25V	A
C	214	87-010-260-080	CAP, ELECT 47-25V	A
C	211	87-010-403-080	CAP, ELECT 3.3-50V	A
C	212	87-010-403-080	CAP, ELECT 3.3-50V	A
C	219	87-010-544-080	CAP, ELECT 0.1-50V	A
C	210	87-018-133-080	CAPACITOR,CER 4700P-16V	A
C	220	87-010-544-080	CAP, ELECT 0.1-50V	A
C	229	87-018-123-080	CAP, CER 220P-50V	A
C	230	87-018-123-080	CAP, CER 220P-50V	A
C	237	87-018-134-080	CAPACITOR,TC-U 0.01-16	A
D	204	87-020-465-080	DIODE,1SS133 (110MA)	A
D	206	87-020-465-080	DIODE,1SS133 (110MA)	A
D	209	87-020-465-080	DIODE,1SS133 (110MA)	A
D	205	87-020-465-080	DIODE,1SS133 (110MA)	A
D	203	87-020-465-080	DIODE,1SS133 (110MA)	A
D	201	87-020-465-080	DIODE,1SS133 (110MA)	A
D	202	87-020-465-080	DIODE,1SS133 (110MA)	A
D	216	87-020-465-080	DIODE,1SS133 (110MA)	A
D	219	87-020-465-080	DIODE,1SS133 (110MA)	A
D	210	87-020-465-080	DIODE,1SS133 (110MA)	A
D	217	87-020-465-080	DIODE,1SS133 (110MA)	A
D	218	87-020-465-080	DIODE,1SS133 (110MA)	A
D	220	87-020-465-080	DIODE,1SS133 (110MA)	A
D	221	87-020-465-080	DIODE,1SS133 (110MA)	A
D	222	87-020-465-080	DIODE,1SS133 (110MA)	A
J	202	87-A60-238-010	TERMINAL,SP 4P (MSC)	A
J	204	87-A60-602-010	JACK,DIA6.3 BLK ST W/SW TC	A
L	202	87-003-383-010	COIL,1UH-S	A
L	201	87-003-383-010	COIL,1UH-S	A
Q	201	87-026-609-080	TR,KTA1266GR	A
Q	203	87-026-609-080	TR,KTA1266GR	A
Q	204	87-026-609-080	TR,KTA1266GR	A
Q	202	87-026-609-080	TR,KTA1266GR	A
Q	207	87-026-610-080	TR,KTC3198GR	A
Q	205	87-026-610-080	TR,KTC3198GR	A
Q	206	87-026-610-080	TR,KTC3198GR	A
Q	208	87-026-610-080	TR,KTC3198GR	A
Q	209	87-026-610-080	TR,KTC3198GR	A
Q	218	87-026-609-080	TR,KTA1266GR	A
Q	216	87-026-610-080	TR,KTC3198GR	A
Q	210	87-026-610-080	TR,KTC3198GR	A
Q	215	87-026-610-080	TR,KTC3198GR	A
Q	213	87-A30-255-010	TR,2SB1342	A
Q	214	87-A30-255-010	TR,2SB1342	A

ELECTRICAL PARTS LIST-3/4

Q	212	87-A30-256-010	TR,2SD1933	A
Q	211	87-A30-256-010	TR,2SD1933	A
R	224	87-A00-258-080	RES,M/F 0.22-1W J	A
R	223	87-A00-258-080	RES,M/F 0.22-1W J	A
R	249	87-A00-258-080	RES,M/F 0.22-1W J	A
R	250	87-A00-258-080	RES,M/F 0.22-1W J	A
C	308	87-010-263-080	CAP, ELECT 100-10V	A
C	307	87-010-263-080	CAP, ELECT 100-10V	A
C	304	87-018-131-080	CAP, CER 1000P-50V	A
C	303	87-018-131-080	CAP, CER 1000P-50V	A
C	302	87-018-131-080	CAP, CER 1000P-50V	A
C	301	87-018-131-080	CAP, CER 1000P-50V	A
C	315	87-010-374-080	CAP, ELECT 47-10V	A
C	318	87-010-546-080	CAP, ELECT 0.33-50V	A
C	317	87-010-546-080	CAP, ELECT 0.33-50V	A
C	326	87-018-205-080	CAP, CERA-SOL 0.022	A
C	361	87-010-374-080	CAP, ELECT 47-10V	A
C	360	87-010-401-080	CAP, ELECT 1-50V	A
C	399	87-018-127-080	CAP, CER 470P-50V	A
C	401	87-010-400-080	CAP, ELECT 0.47-50V	A
C	402	87-010-400-080	CAP, ELECT 0.47-50V	A
C	404	87-018-118-080	CAP,TC-U 82P-50 B	A
C	403	87-018-118-080	CAP,TC-U 82P-50 B	A
C	412	87-010-405-080	CAP, ELECT 10-50V	A
C	411	87-010-405-080	CAP, ELECT 10-50V	A
C	452	87-010-382-080	CAP, ELECT 22-25V	A
C	459	87-018-128-080	CAP, CERA-SOL SS 560P	A
C	458	87-018-131-080	CAP, CER 1000P-50V	A
C	462	87-018-126-080	CAP,TC-U 390P-50 B	A
C	461	87-018-126-080	CAP,TC-U 390P-50 B	A
CN	301	87-A60-620-010	CONN,3P V 2MM JMT	A
CN	351	87-A60-625-010	CONN,8P V 2MM JMT	A
D	401	87-020-465-080	DIODE,1SS133 (110MA)	A
IC	301	87-017-889-010	IC,NJM4558LD	A
IC	401	87-017-889-010	IC,NJM4558LD	A
L	451	87-007-342-010	COIL,OSC 85K BIAS	A
Q	306	87-026-218-080	TR,DTC144ES (0.2W)	A
Q	309	87-026-609-080	TR,KTA1266GR	A
Q	303	87-A30-090-080	FET,2SK2541	A
Q	304	87-A30-090-080	FET,2SK2541	A
Q	305	87-A30-091-080	FET,2SJ460	A
Q	301	87-A30-091-080	FET,2SJ460	A
Q	307	87-A30-091-080	FET,2SJ460	A
Q	308	87-A30-091-080	FET,2SJ460	A
Q	302	87-A30-091-080	FET,2SJ460	A
Q	310	87-026-609-080	TR,KTA1266GR	A
Q	444	87-026-609-080	TR,KTA1266GR	A
Q	443	87-026-609-080	TR,KTA1266GR	A
Q	454	87-026-610-080	TR,KTC3198GR	A
Q	453	87-026-610-080	TR,KTC3198GR	A
Q	451	87-026-610-080	TR,KTC3198GR	A
SFR	452	87-024-355-080	SFR,33K DIA6 H	A
SFR	451	87-024-355-080	SFR,33K DIA6 H	A
C	602	87-018-195-080	CAP, CER 1200P-16V	A
C	601	87-018-195-080	CAP, CER 1200P-16V	A
C	616	87-010-260-080	CAP, ELECT 47-25V	A
C	617	87-010-260-080	CAP, ELECT 47-25V	A
C	612	87-010-545-080	CAP, ELECT 0.22-50V	A
C	611	87-010-545-080	CAP, ELECT 0.22-50V	A
C	614	87-010-545-080	CAP, ELECT 0.22-50V	A
C	613	87-010-545-080	CAP, ELECT 0.22-50V	A
C	615	87-018-104-080	CAP,TC-U 10P-50 SL	A
CN	602	87-099-194-010	CONN,6P 6216V	A
CN	601	87-099-719-010	CONN,30P TYK-B(X)	A
D	601	87-A40-466-080	ZENER,MTZJ2.7A	A
D	602	87-A40-466-080	ZENER,MTZJ2.7A	A
IC	601	87-A20-715-010	IC,M62439SP	A
J	601	87-A60-425-010	JACK,PIN 2P YKC21-3838	A
C	707	87-010-112-080	CAP, ELECT 100-16V	A
C	709	87-010-248-080	CAP, ELECT 220-10V	A
C	701	87-010-404-080	CAP, ELECT 4.7-50V	A
C	704	87-018-131-080	CAP, CER 1000P-50V	A
C	705	87-018-131-080	CAP, CER 1000P-50V	A
C	706	87-018-131-080	CAP, CER 1000P-50V	A
C	702	87-018-134-080	CAPACITOR,TC-U 0.01-16	A
C	703	87-018-134-080	CAPACITOR,TC-U 0.01-16	A
C	708	87-A11-144-080	CAP,TC U 0.1-50 K B	A
C	710	87-010-112-080	CAP, ELECT 100-16V	A
C	714	87-010-112-080	CAP, ELECT 100-16V	A
C	715	87-018-119-080	CAP, CER 100P-50V	A
C	712	87-018-149-080	CAP,TC-U 15P-50 CH	A
C	713	87-018-149-080	CAP,TC-U 15P-50 CH	A
D	701	87-017-931-080	ZENER,MTZJ5.6B	A
IC	701	87-070-127-110	IC,LC72131 D	A
L	701	87-005-847-080	COIL,2.2UH(CECS)	A
Q	701	87-A30-196-080	TR,2SC4115SRS	A
X	701	87-A70-061-010	VIB,XTAL 4.500MHZ CSA-309	A
C	746	87-018-134-080	CAPACITOR,TC-U 0.01-16	A
C	758	87-010-112-080	CAP, ELECT 100-16V	A
C	753	87-010-408-080	CAP, ELECT 47-50V	A
C	756	87-018-134-080	CAPACITOR,TC-U 0.01-16	A
C	757	87-018-134-080	CAPACITOR,TC-U 0.01-16	A

ELECTRICAL PARTS LIST-4/4

C	759	87-018-134-080	CAPACITOR,TC-U 0.01-16	A.....
C	755	87-A11-144-080	CAP,TC U 0.1-50 K B	A.....
C	762	87-010-400-080	CAP, ELECT 0.47-50V	A.....
C	764	87-010-401-080	CAP, ELECT 1-50V	A.....
C	763	87-010-401-080	CAP, ELECT 1-50V	A.....
C	769	87-010-403-080	CAP, ELECT 3.3-50V	A.....
C	761	87-010-404-080	CAP, ELECT 4.7-50V	A.....
C	766	87-010-407-080	CAP, ELECT 33-50V	A.....
C	765	87-018-115-080	CAP, CER 47P-50V	A.....
C	768	87-018-208-080	CAP 0.047-50F	A.....
C	774	87-010-405-080	CAP, ELECT 10-50V	A.....
C	771	87-010-406-080	CAP, ELECT 22-50	A.....
C	773	87-018-131-080	CAP, CER 1000P-50V	A.....
C	770	87-018-134-080	CAPACITOR,TC-U 0.01-16	A.....
C	776	87-018-134-080	CAPACITOR,TC-U 0.01-16	A.....
C	789	87-010-403-080	CAP, ELECT 3.3-50V	A.....
C	786	87-010-405-080	CAP, ELECT 10-50V	A.....
C	785	87-010-405-080	CAP, ELECT 10-50V	A.....
C	788	87-018-132-080	CAP, CER 2200P-16V	A.....
C	787	87-018-132-080	CAP, CER 2200P-16V	A.....
C	783	87-018-199-080	CAP, CER 3300P	A.....
C	784	87-018-199-080	CAP, CER 3300P	A.....
C	790	87-010-403-080	CAP, ELECT 3.3-50V	A.....
D	751	87-020-465-080	DIODE,1SS133 (110MA)	A.....
IC	751	87-A20-913-010	IC,LA1837NL	A.....
L	771	87-A50-266-010	COIL,FM DET-2N(TOK)	A.....
L	772	87-A90-733-010	FLTR,PCFAZH-450 (TOK)	A.....
C	808	87-018-134-080	CAPACITOR,TC-U 0.01-16	A.....
C	807	87-A11-144-080	CAP,TC U 0.1-50 K B	A.....
C	805	87-A11-144-080	CAP,TC U 0.1-50 K B	A.....
C	813	87-018-131-080	CAP, CER 1000P-50V	A.....
C	901	87-018-209-080	CAP, CER 0.1-50V	A.....
C	944	87-018-104-080	CAP,TC-U 10P-50 SL	A.....
C	943	87-A11-144-080	CAP,TC U 0.1-50 K B	A.....
CF	801	87-008-261-010	FILTER, SFE10.7MA5-A	A.....
FFE	801	A8-8ZA-190-030	8ZA-1 FEUNM	A.....
J	801	87-A60-202-010	TERMINAL,ANT 4P MSP-154V-02	A.....
L	801	87-005-847-080	COIL,2.2UH(CECS)	A.....
L	981	87-NF4-650-010	COIL,AM PACK 4N(TOK)	A.....
Q	801	87-026-214-080	TR,DTA114YS (0.3W)	A.....

MECHANICAL PARTS LIST-1/1

NOTE: The characters in the suffix column indicate the part usage.

USTM .....XX.....A.....

REF.NO	PARTS NO.	KANRI NO.	DESCRIPTION	SUFFIX
	82-NE6-067-010		BADGE,AIWA 30N	A
	8Z-MA4-006-010		BOX,CASS L	A
	8Z-MA4-007-010		BOX,CASS,R	A
	8Z-MA5-021-010		PANEL,SIDE LU(5)	A
	8Z-MA5-022-010		PANEL,SIDE RU(5)	A
	8Z-MA5-024-010		PANEL,TOP U(5)	A
	8Z-MA6-004-010		CABI,FR U(6)	A
	8Z-MA6-016-010		CABI,REAR USTM(6)	A
	8Z-MA4-030-010		KEY,POWER	A
	8Z-MA4-032-010		KEY,T-BASS	A
	8Z-MA4-038-010		KEY,CASS L	A
	8Z-MA4-039-010		KEY,CASS R	A
	8Z-MA4-041-010		KNOB,RTRY VOL	A
	8Z-MA5-016-010		KEY,OPEN(5)	A
	8Z-MA6-005-010		KEY,PLAY(6)	A
	8Z-MA6-006-010		PLATE,JOG(6)	A
	8Z-MA6-013-010		KEY,GEQ 1(6)	A
	8Z-MA6-014-010		KEY,GEQ 2(6)	A
	81-532-080-010		LABEL, CASS. COMPT	A
	87-MAT-009-010		WINDOW,TOP(U)	A
	8Z-MA4-025-010		WINDOW,CASS L	A
	8Z-MA4-026-010		WINDOW,CASS R	A
	8Z-MA4-027-010		WINDOW,CD	A
	8Z-MA5-010-010		PANEL,TRAY(5)	A
	8Z-MA6-007-010		WINDOW,AMP U(6)	A
	84-ZG1-245-210		CAP,OPTICAL	A
	83-MA2-205-110		SRR-T,EJECT	A
	86-NFZ-231-010		DMPR,70	A
	88-MA1-208-110		JOINT,CABI	A
	88-NF9-203-010		BUSHING,CORD-U	A
	87-067-641-010		UTT2+3-8(W/O SLOT)BL	A
	87-067-703-010		TAPPING SCREW, BVT2+3-10	A
	87-067-758-010		BVT2+3-12 W/O SLOT	A
	87-078-060-010		BVIT3PB+3-10	A
	87-591-095-410		TAPPING SCREW, QIT+3-8 (GLD)	A
	87-721-096-410		QT2+3-10 GLD	A
	87-741-172-410		UT2+4-12 W/O SLOT	A
	87-A80-110-010		AC CORD ASSY,U SPT-2W	A
	88-906-271-110		CABLE,FFC 6P-1.25	A
	88-913-221-110		FF-CABLE, 13P 1.25 220MM	A
F 101	87-035-482-010		FUSE,1A 125V T 237	A
PT 101	8Z-MA6-601-010		PT,ZMA-6 U	A
	82-NF7-210-110		GUIDE,FL (*)	A
WH 101	87-A90-459-010		HLDR,WIRE 2.5-5P	A
W 101	83-NE2-618-110		F-CABEL,5P-2.5	A
WH 102	87-A90-459-010		HLDR,WIRE 2.5-5P	A
	87-067-584-010		TAPPING SCREW, BVT2+3-6	A
	87-067-703-010		TAPPING SCREW, BVT2+3-10	A

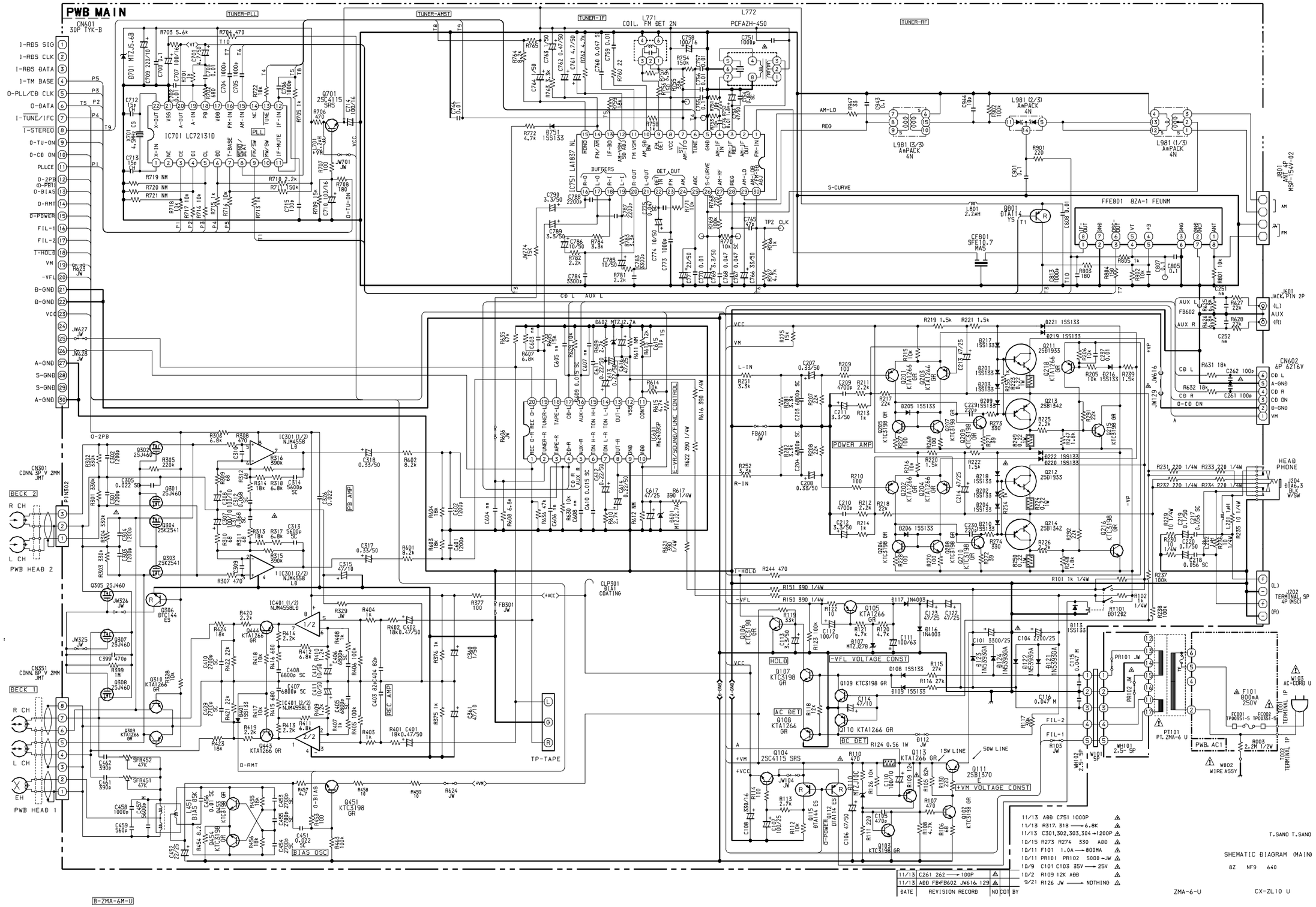
ACCESSORIES / PACKAGE LIST-1/1

NOTE: The characters in the suffix column indicate the part usage.

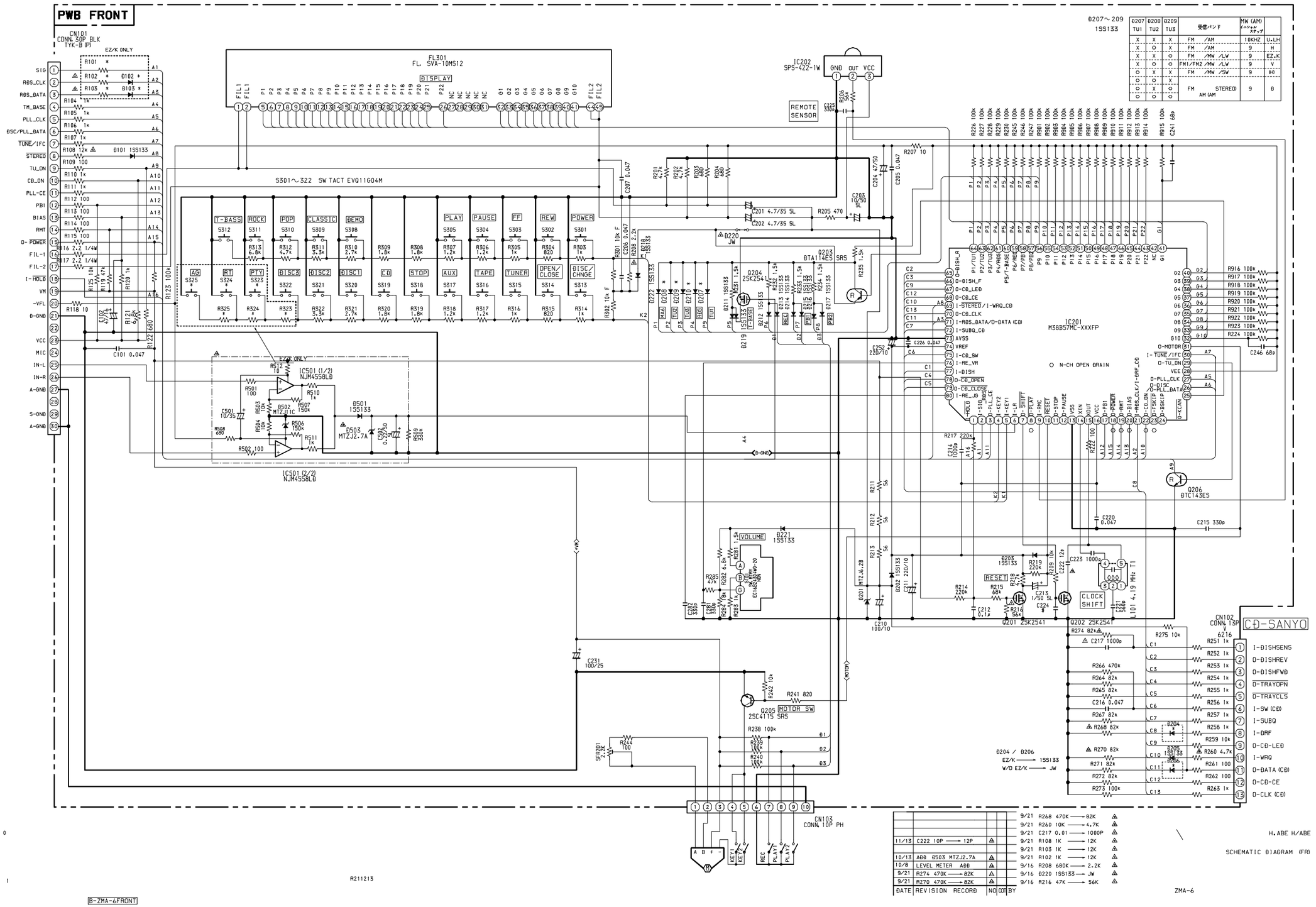
USTM .....XX.....A.....

REF.NO	PARTS NO.	KANRI NO.	DESCRIPTION	SUFFIX
	8Z-MA6-903-010		IB,U(ESF)M	A.....
	87-043-115-010		ANT,FEEDER FM	A.....
	87-A90-030-010		ANT,LOOP AM-NC C	A.....
	8Z-NF9-701-010		RC UNIT,ZAS02	A.....

SCHEMATIC DIAGRAM – 1 (AMP)



SCHEMATIC DIAGRAM – 2 (FRONT)



D207 TU1	D208 TU2	D209 TU3	受信バンド	MW (AM) イベッセル ステップ	
X	X	X	FM /AM	10KHZ	U-LH
X	O	O	FM /AM	9	H
X	X	O	FM /MW /LW	9	EZ-K
X	O	O	FM1/FM2 /MW /LW	9	V
O	X	X	FM /MW /SW	9	00
O	O	X			
O	X	O	FM STEREO AM IAM	9	0

DATE	REVISION RECORD	NO	CHK	BY
11/13	C222 10P ⟶ 12P			
10/13	ADD D503 MTZJ2.7A			
10/8	LEVEL METER ADD			
9/21	R274 470K ⟶ 82K			
9/21	R270 470K ⟶ 82K			
9/21	R268 470K ⟶ 82K			
9/21	R260 10K ⟶ 4.7K			
9/21	C217 0.01 ⟶ 1000P			
9/21	R108 1K ⟶ 12K			
9/21	R103 1K ⟶ 12K			
9/21	R102 1K ⟶ 12K			
9/16	R208 680K ⟶ 2.2K			
9/16	D220 1SS133 ⟶ JW			
9/16	R216 47K ⟶ 56K			

H.ABE H/ABE

SCHEMATIC DIAGRAM (FR)

ZMA-6

R211213

B-ZMA-6FRONT

サービス技術ニュース	
番号	連絡内容
G－　－	
G－　－	
G－　－	

アイワ株式会社
AIWA CO.,LTD.

9820527
Tokyo Japan

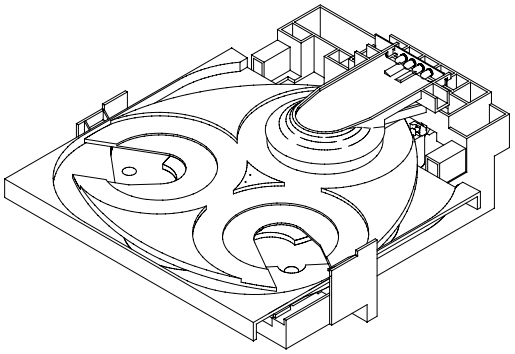
〒110-8710 東京都台東区池之端1-2-11 ☎03 (3827) 3111 (代表)

Printed in Singapore

aiwa

aiwa SERVICE

4ZG-1



CD MECHANISM

• BASIC CD MECHANISM:3ZG-2 E1

• TYPE: English

BASIC NAME	DERIVATION NAME					
4ZG-1	V	O	S1	D	SH	

■ This Service Manual has various derivation.Derivation name is indicated by the Service Manual for each model.

SERVICE MANUAL

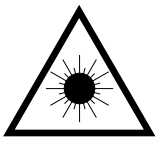
S/M Code No 09-985-249-80T

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

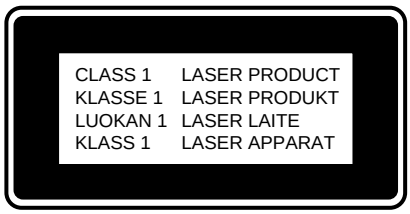
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

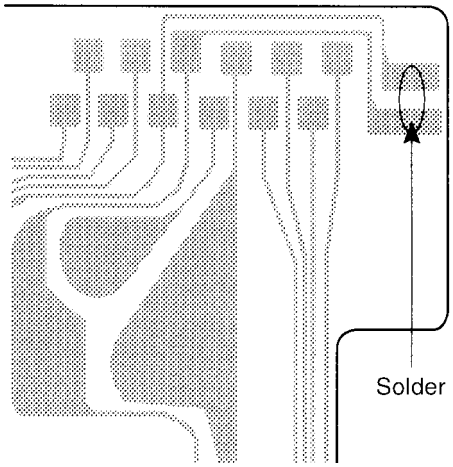


Precaution to replace Optical block (KSS-213F)

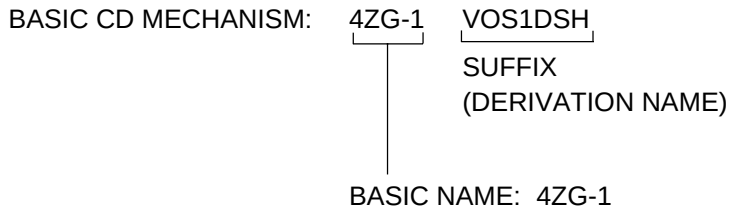
Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



This is the SERVICE MANUAL for the BASIC CD MECHANISM of BASIC NAME: 4ZG-1. This BASIC NAME includes the following models as shown under the SUFFIX name: DERIVATION NAME. Please use this manual with the separate SERVICE MANUAL for DERIVATION NAME.



BASIC NAME	DERIVATION NAME							
4ZG-1	V	O	S1	D	SH	—	—	—

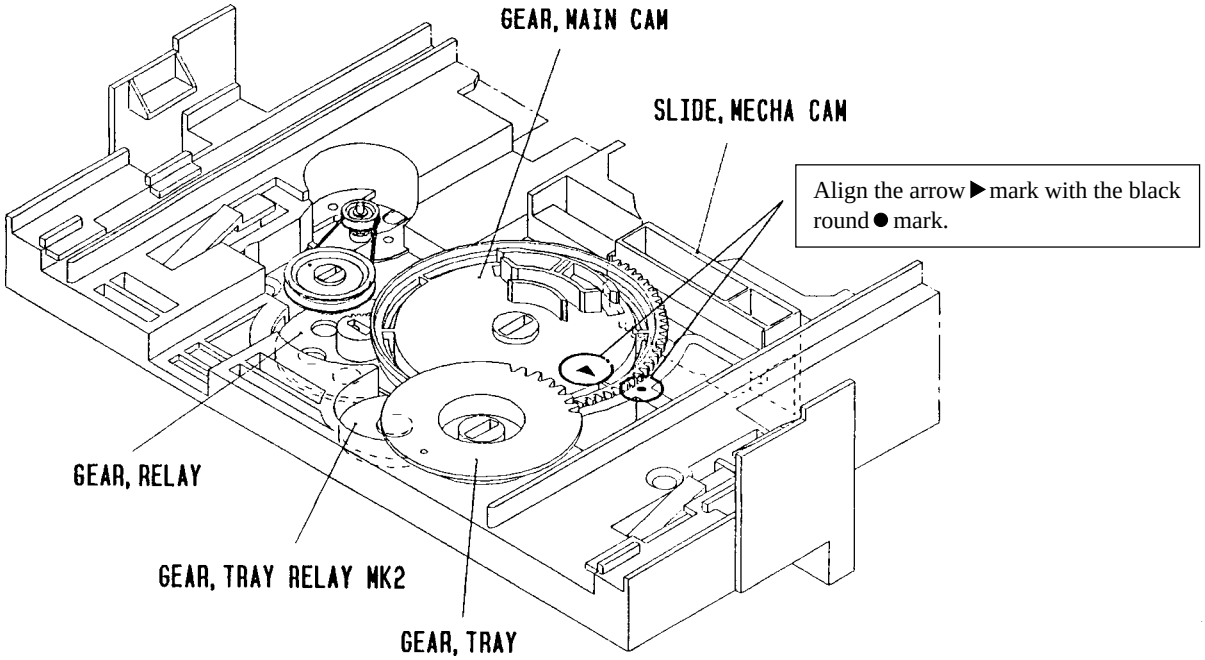
DERIVATION NAME

- V: VIDEO OUT
- O: On screen display
- S1: THE 1st SONY IC MODEL
- D: Digital output function
- SH: Pick up equipped with shutter

How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

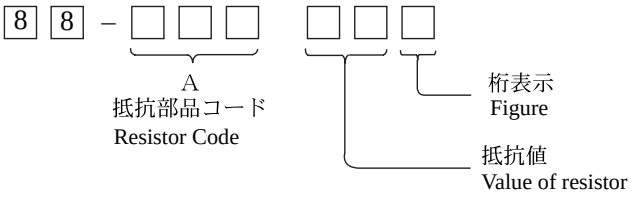
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-919-040		C-IC,BA5915FP
	87-A20-917-010		C-IC,CXD2540Q-1/2
	84-ZG1-697-010		C-IC,UPD78016FGC-549
	87-017-825-010		IC,GP1F32T
	87-017-760-080		IC,M51943BML
	87-A20-602-040		C-IC,M5291FP
	87-A20-925-040		C-IC,BA05FP
	87-A20-905-040		C-IC,BA033FP
	87-001-873-010		IC,LB1644
	87-A20-920-010		C-IC,CL680-D1
	87-A20-921-040		C-IC,SN74LVU04APW
	87-A20-656-040		C-IC,MB81V4260S-60/70PFTN
	84-ZG1-695-040		C-IC,LH5V2RN1
	87-A20-975-040		C-IC,SN74LV74APW
	87-A20-974-040		C-IC,LC74781M-9017
	87-A20-918-040		C-IC,SM5878AM
TRANSISTOR			
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-237-080		CHIP-TR,DTC124XK
	89-327-125-080		CHIP TR,2SC2712GR
	87-026-231-080		CHIP-TRANSISTER,DTA124XK
	87-A30-117-010		TR,2SA1357
	89-111-625-080		TR,2SA1162 (0.15W)
	87-026-580-080		C-TR,DTA123JK
	87-026-470-080		TR,HN1C03F (0.3W)
DIODE			
	87-020-027-080		CHIP-DIODE 1SS184
	87-017-024-040		C-DIODE,DA204K
	87-A40-180-040		C-DIODE,SB07-015C
	87-A40-384-080		C-ZENER,UDZ3.3B
3CD C.B			
C101	87-010-182-080		C-CAP,S 2200P-50 B
C102	87-016-669-080		C-CAP,S 0.1-25 K B
C103	87-016-669-080		C-CAP,S 0.1-25 K B
C104	87-016-669-080		C-CAP,S 0.1-25 K B
C105	87-010-404-040		CAP,E 4.7-50 SME
C106	87-016-369-080		C-CAP,S 0.033-25 B K
C107	87-010-197-080		CAP, CHIP 0.01 DM
C108	87-010-401-040		CAP,E 1-50 SME
C109	87-010-382-040		CAP,E 22-25 SME
C110	87-010-213-080		C-CAP,S 0.015-50 B
C111	87-010-263-040		CAP,E 100-10
C112	87-010-197-080		CAP, CHIP 0.01 DM
C113	87-016-369-080		C-CAP,S 0.033-25 B K
C114	87-016-369-080		C-CAP,S 0.033-25 B K
C115	87-016-369-080		C-CAP,S 0.033-25 B K
C116	87-012-158-080		C-CAP,S 390P-50 CH
C117	87-012-154-080		C-CAP,S 150P-50 CH
C118	87-010-494-040		CAP,E 1-50 GAS
C119	87-010-152-080		C-CAP,S 8P-50 CH
C120	87-010-992-080		C-CAP,S 0.047-25 B
C121	87-010-992-080		C-CAP,S 0.047-25 B
C123	87-016-669-080		C-CAP,S 0.1-25 K B
C125	87-010-198-080		CAP, CHIP 0.022
C126	87-016-669-080		C-CAP,S 0.1-25 K B
C127	87-010-555-040		CAP,E 100-10 GAS
C130	87-010-555-040		CAP,E 100-10 GAS
C131	87-010-555-040		CAP,E 100-10 GAS
C132	87-010-178-080		CHIP CAP 1000P
C133	87-010-555-040		CAP,E 100-10 GAS
C134	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-196-080		CHIP CAPACITOR,0.1-25
C136	87-010-196-080		CHIP CAPACITOR,0.1-25
C137	87-010-196-080		CHIP CAPACITOR,0.1-25
C138	87-010-182-080		C-CAP,S 2200P-50 B
C139	87-010-197-080		CAP, CHIP 0.01 DM
C140	87-010-112-040		CAP,E 100-16
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C142	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-213-080		C-CAP,S 0.015-50 B
C151	87-010-263-040		CAP,E 100-10
C152	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-A10-893-040		CAP,E 220-10 M PW
C154	87-010-197-080		CAP, CHIP 0.01 DM
C155	87-010-184-080		CHIP CAPACITOR 3300P(K)
C156	87-010-992-080		C-CAP,S 0.047-25 B
C157	87-010-992-080		C-CAP,S 0.047-25 B
C158	87-012-156-080		C-CAP,S 220P-50 CH
C159	87-016-526-080		C-CAP,S 0.47-16 BK
C160	87-010-314-080		C-CAP,S 22P-50V
C161	87-010-182-080		C-CAP,S 2200P-50 B
C162	87-010-178-080		CHIP CAP 1000P
C201	87-016-669-080		C-CAP,S 0.1-25 K B
C204	87-010-197-080		CAP, CHIP 0.01 DM
C205	87-010-379-040		CAP,E 22-16 M SME
C206	87-010-322-080		C-CAP,S 100P-50 CH
C207	87-010-322-080		C-CAP,S 100P-50 CH
C208	87-010-322-080		C-CAP,S 100P-50 CH
C209	87-010-322-080		C-CAP,S 100P-50 CH
C210	87-016-669-080		C-CAP,S 0.1-25 K B
C211	87-010-263-040		CAP,E 100-10
C213	87-010-190-080		S CHIP F 0.01
C214	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-016-251-040		CAP,E 220-16 SMG
C302	87-012-140-080		CAP 470P
C303	87-010-178-080		CHIP CAP 1000P
C304	87-010-384-040		CAP,E 100-25 SME
C305	87-010-982-040		CAP,E 33-25 GAS
C306	87-010-112-040		CAP,E 100-16
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C308	87-010-263-040		CAP,E 100-10
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-263-040		CAP,E 100-10
C311	87-010-196-080		CHIP CAPACITOR,0.1-25
C312	87-010-178-080		CHIP CAP 1000P
C320	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-016-044-040		CAP,E 100-16 GAS
C402	87-010-190-080		S CHIP F 0.01
C403	87-010-190-080		S CHIP F 0.01
C501	87-010-197-080		CAP, CHIP 0.01 DM
C502	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-197-080		CAP, CHIP 0.01 DM
C504	87-010-154-080		CAP CHIP 10P
C505	87-010-154-080		CAP CHIP 10P
C506	87-010-197-080		CAP, CHIP 0.01 DM
C508	87-010-263-040		CAP,E 100-10
C509	87-016-669-080		C-CAP,S 0.1-25 K B
C510	87-010-263-040		CAP,E 100-10
C511	87-016-669-080		C-CAP,S 0.1-25 K B
C512	87-010-197-080		CAP, CHIP 0.01 DM
C513	87-010-197-080		CAP, CHIP 0.01 DM
C514	87-010-197-080		CAP, CHIP 0.01 DM
C518	87-010-322-080		C-CAP,S 100P-50 CH
C519	87-012-145-080		CAP, CHIP S 270P CH
C520	87-012-157-080		C-CAP,S 330P-50 CH
C521	87-012-154-080		C-CAP,S 150P-50 CH
C522	87-010-371-080		CAP, ELECT 470-6.3V
C523	87-010-197-080		CAP, CHIP 0.01 DM
C524	87-010-197-080		CAP, CHIP 0.01 DM
C525	87-010-197-080		CAP, CHIP 0.01 DM
C526	87-010-197-080		CAP, CHIP 0.01 DM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C527	87-010-197-080		CAP, CHIP 0.01 DM
C528	87-010-197-080		CAP, CHIP 0.01 DM
C529	87-010-197-080		CAP, CHIP 0.01 DM
C530	87-010-197-080		CAP, CHIP 0.01 DM
C531	87-010-197-080		CAP, CHIP 0.01 DM
C532	87-010-374-040		CAP,E 47-10
C533	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-555-040		CAP,E 100-10 GAS
C535	87-010-197-080		CAP, CHIP 0.01 DM
C536	87-010-078-040		CAP,E 47-6.3 5L
C537	87-010-197-080		CAP, CHIP 0.01 DM
C538	87-010-196-080		CHIP CAPACITOR,0.1-25
C539	87-016-669-080		C-CAP,S 0.1-25 K B
C540	87-010-078-040		CAP,E 47-6.3 5L
C541	87-010-197-080		CAP, CHIP 0.01 DM
C542	87-010-318-080		C-CAP,S 47P-50 CH
C544	87-010-197-080		CAP, CHIP 0.01 DM
C546	87-010-197-080		CAP, CHIP 0.01 DM
C549	87-010-494-040		CAP,E 1-50 GAS
C550	87-010-196-080		CHIP CAPACITOR,0.1-25
C551	87-012-153-080		C-CAP,S 120P-50 CH
C552	87-016-526-080		C-CAP,S 0.47-16 BK
C554	87-010-197-080		CAP, CHIP 0.01 DM
C556	87-010-378-040		CAP,E 10-16
C557	87-010-316-080		C-CAP,S 33P-50 CH
C558	87-010-315-080		C-CAP,S 27P-50 CH
C560	87-010-197-080		CAP, CHIP 0.01 DM
C601	87-010-197-080		CAP, CHIP 0.01 DM
C602	87-010-197-080		CAP, CHIP 0.01 DM
C603	87-010-112-040		CAP,E 100-16
C604	87-010-196-080		CHIP CAPACITOR,0.1-25
C605	87-010-197-080		CAP, CHIP 0.01 DM
C606	87-010-197-080		CAP, CHIP 0.01 DM
C607	87-010-313-080		CAP, CHIP 18P
C608	87-010-313-080		CAP, CHIP 18P
C609	87-010-178-080		CHIP CAP 1000P
C610	87-010-178-080		CHIP CAP 1000P
C611	87-010-178-080		CHIP CAP 1000P
C612	87-010-178-080		CHIP CAP 1000P
C613	87-010-403-040		CAP,E 3.3-50 SME
C614	87-010-403-040		CAP,E 3.3-50 SME
C615	87-010-318-080		C-CAP,S 47P-50 CH
C616	87-010-318-080		C-CAP,S 47P-50 CH
CN101	87-A60-424-010		CONN,16P V TOC-B
CN102	87-099-199-010		CONN,6P 6216 H
CN401	87-099-212-010		CONN,5P 6216 V
CN403	87-099-030-010		CONN,13P 6216H
J501	87-009-502-010		JACK,PIN 1P Y EARTH
L101	87-005-196-080		COIL,10UH
L301	87-A50-095-010		COIL,68UH RCR875D
L302	87-005-426-080		COIL,3.3UH K FLR50
L502	87-005-204-080		COIL,47UH
L503	87-005-189-080		COIL 2.7UH
L504	87-005-187-080		COIL,1.8UH
L505	87-005-204-080		COIL,47UH
L506	87-005-204-080		COIL,47UH
L507	87-005-204-080		COIL,47UH
L508	87-005-817-080		C-COIL, 33UH J FLC32
M401	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R130	87-022-364-080		C-RES,S 82K-1/10W F
R131	87-022-364-080		C-RES,S 82K-1/10W F
R132	87-022-364-080		C-RES,S 82K-1/10W F
R133	87-022-364-080		C-RES,S 82K-1/10W F
R134	87-022-364-080		C-RES,S 82K-1/10W F
R135	87-022-364-080		C-RES,S 82K-1/10W F
R507	87-A00-408-080		C-RES,S 2K-1/10W D
S201	87-A90-162-010		SW,SL 1-1-3 SSSU
S401	87-036-109-010		PUSH SWITCH
S402	87-036-109-010		PUSH SWITCH
W1	84-ZG1-673-010		F-CABLE,5P 1.25 210MM BLACK N
W2	85-NFT-611-110		FF-CABLE 16P-1.0
W3	84-ZG1-630-010		CABLE FFC 6P-1.25
X201	87-A70-124-080		VIB,CER 8.0MHZ
X501	87-A70-125-080		VIB,XTAL 27MHZ 50PPM
X601	87-030-270-080		VIB,XTAL 16.9344MHZ
LED C.B			
LED401	87-070-200-080		LED,SLP636C-81-S-T1
LED402	87-017-350-080		LED,SEL1550CM
LED403	87-017-350-080		LED,SEL1550CM
LED404	87-070-200-080		LED,SLP636C-81-S-T1
T-T C.B			
C401	87-018-214-080		CAP TC U 0.1-50F
CON401	86-NFZ-675-010		CONN,5P H 6216-11H
PS401	87-026-573-010		IC,GP1S53V
DRIVE C.B			
CN3	87-009-349-010		CONN,6P H WHT PH
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
SW1	87-A90-042-010		SW,LEAF MSW-17310MVPO
CD MOTOR C.B			
CN4	87-099-210-010		CONN,5P H BLK 6216
M1	87-045-305-010		MOT,RF-500TB
SW1	87-035-110-010		SW,MICRO SPPB62
SW2	87-035-110-010		SW,MICRO SPPB62

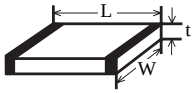
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

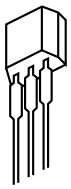
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



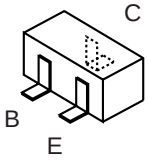
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード　: A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

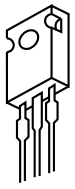
TRANSISTOR ILLUSTRATION



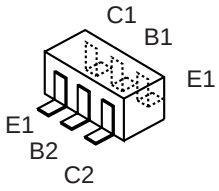
2SA933S



2SA1162
2SC2712
DTA123JK
DTA124XK
DTC124XK

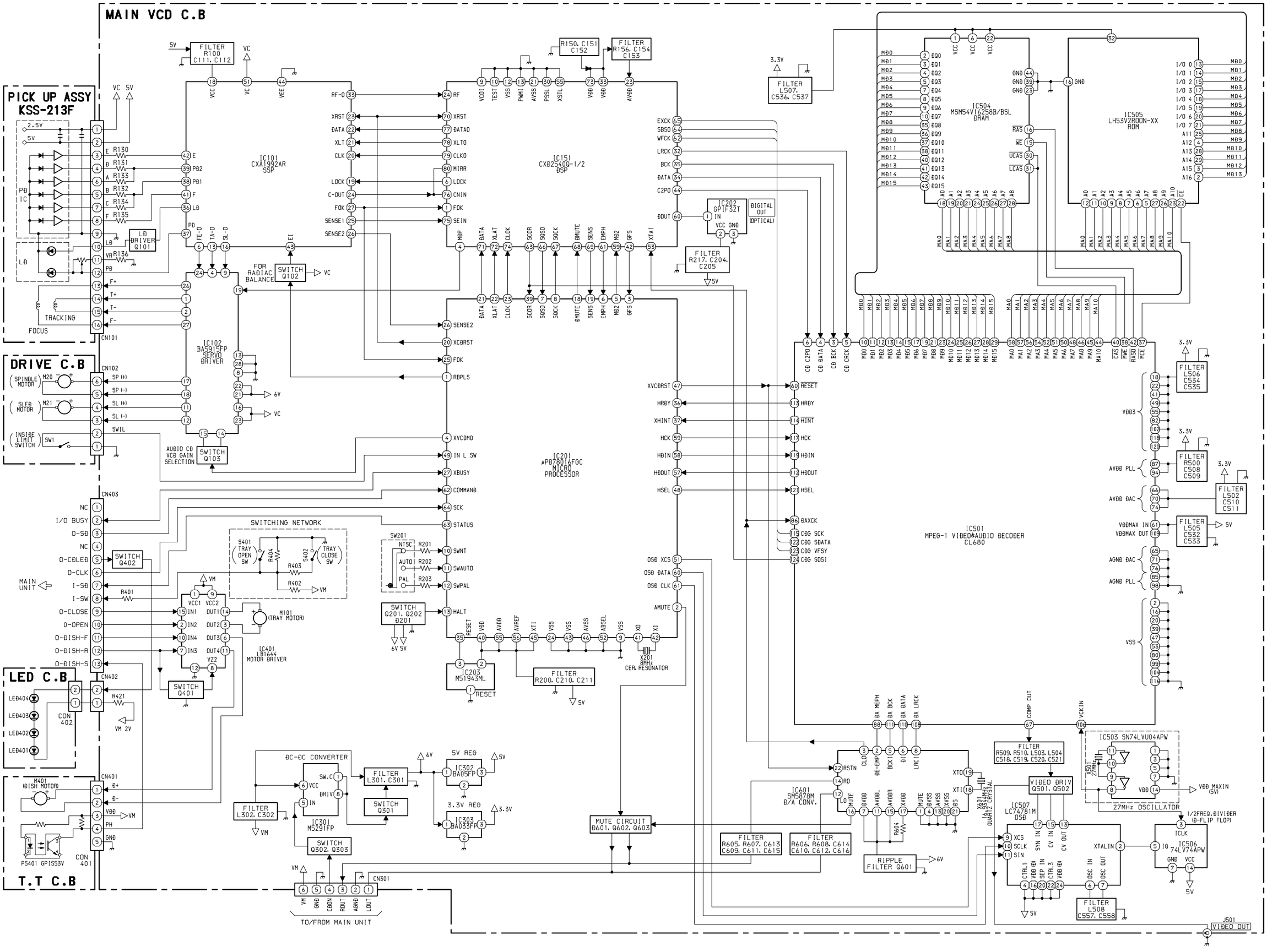


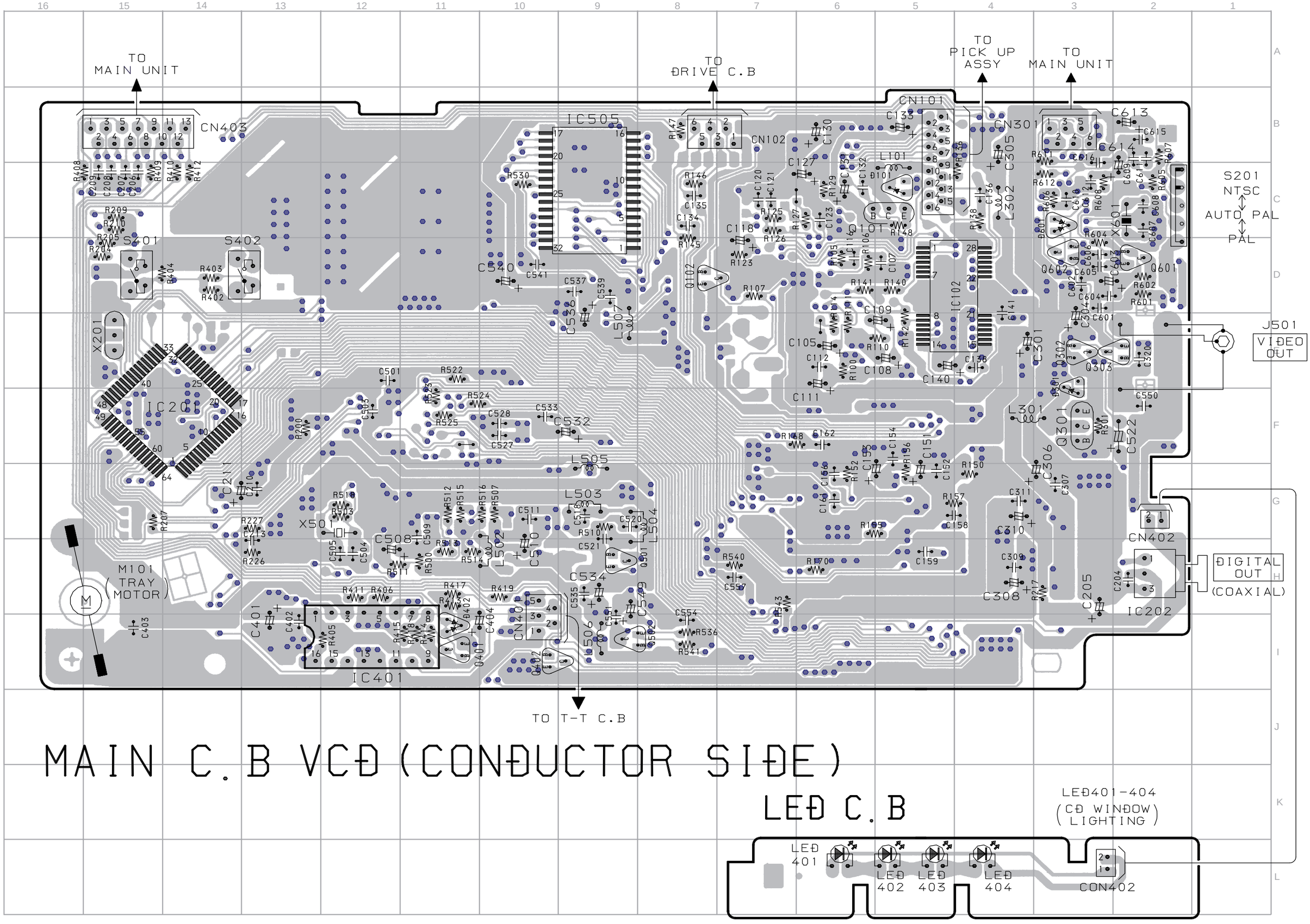
2SA1357

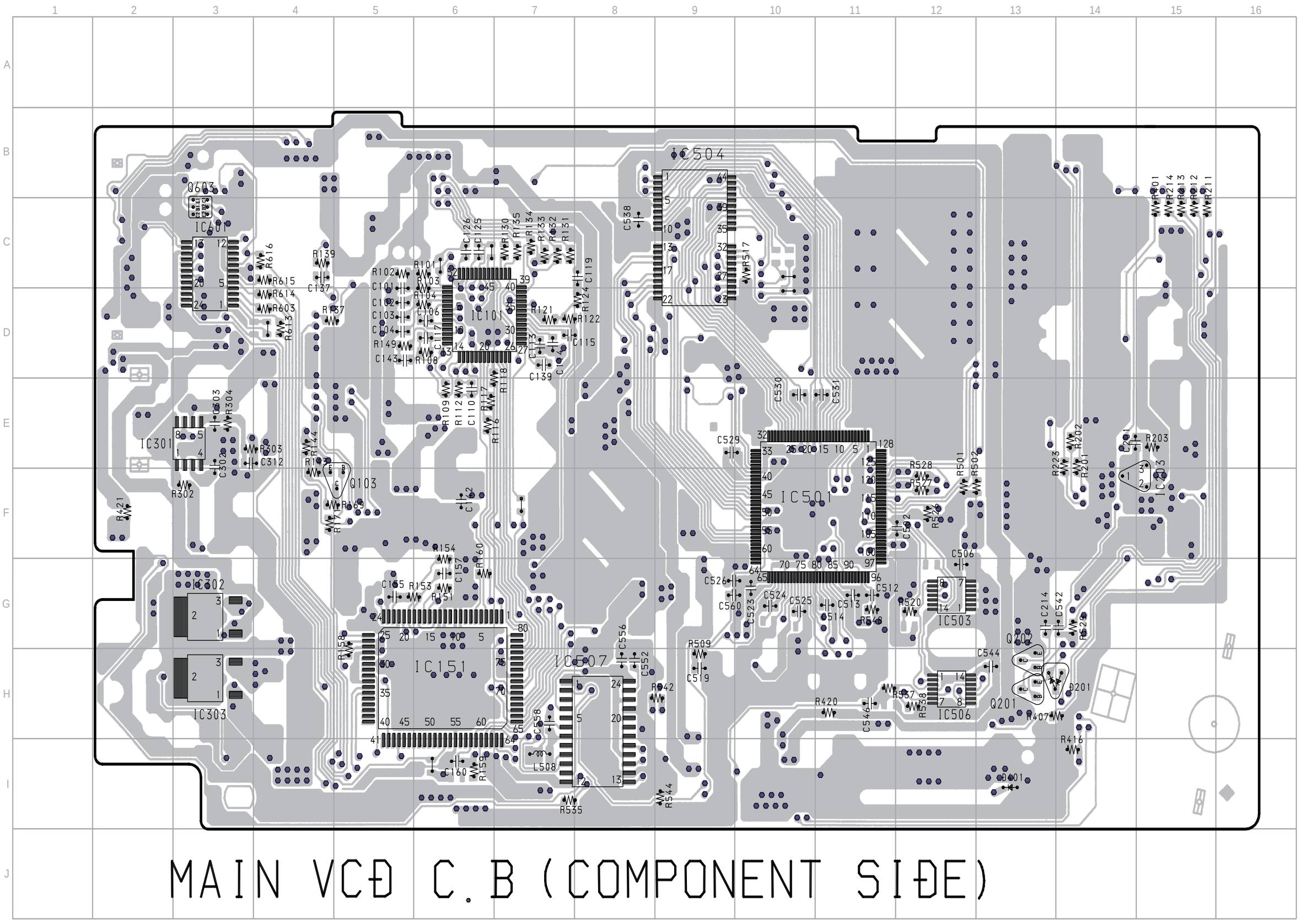


HN1C03F

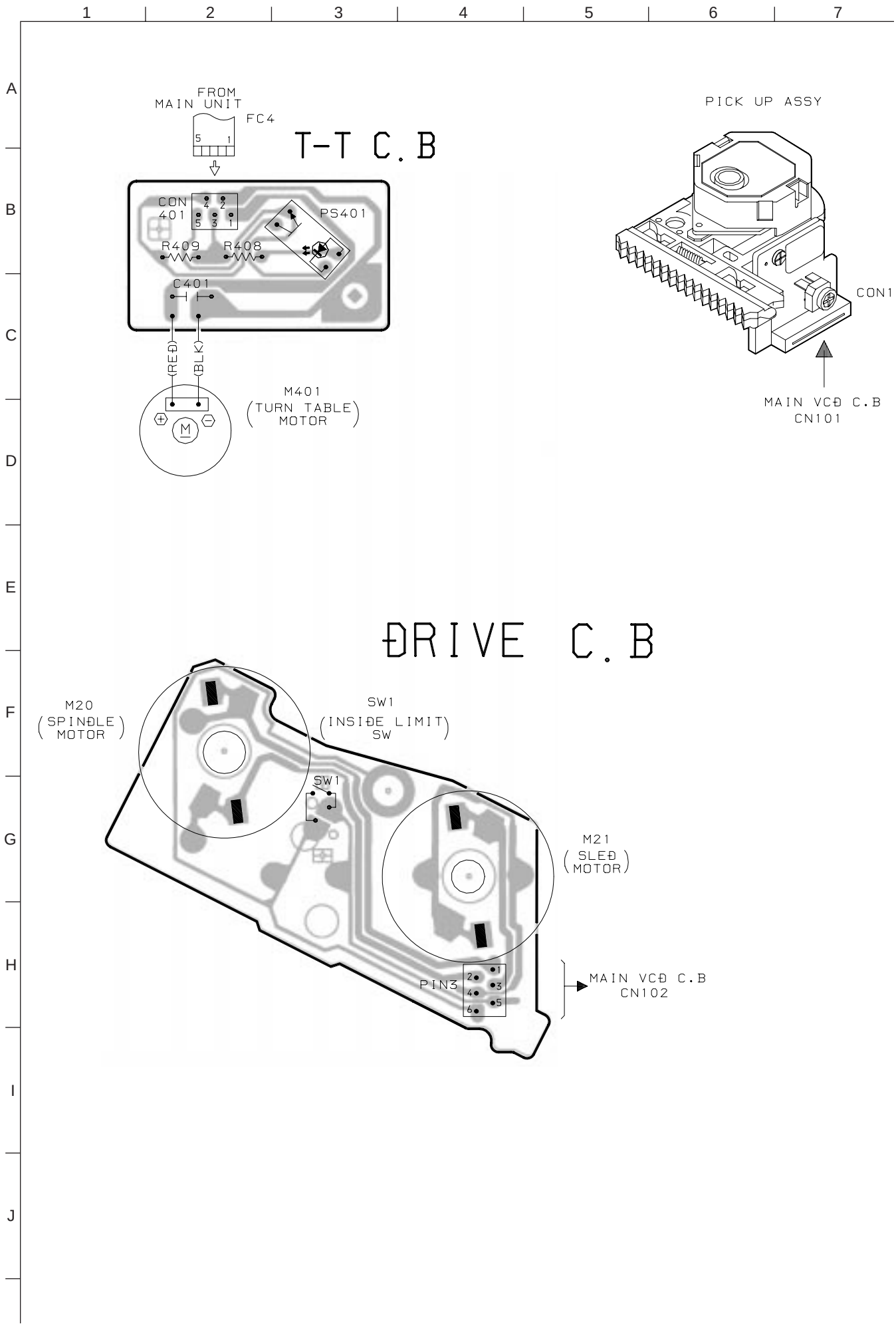
BLOCK DIAGRAM



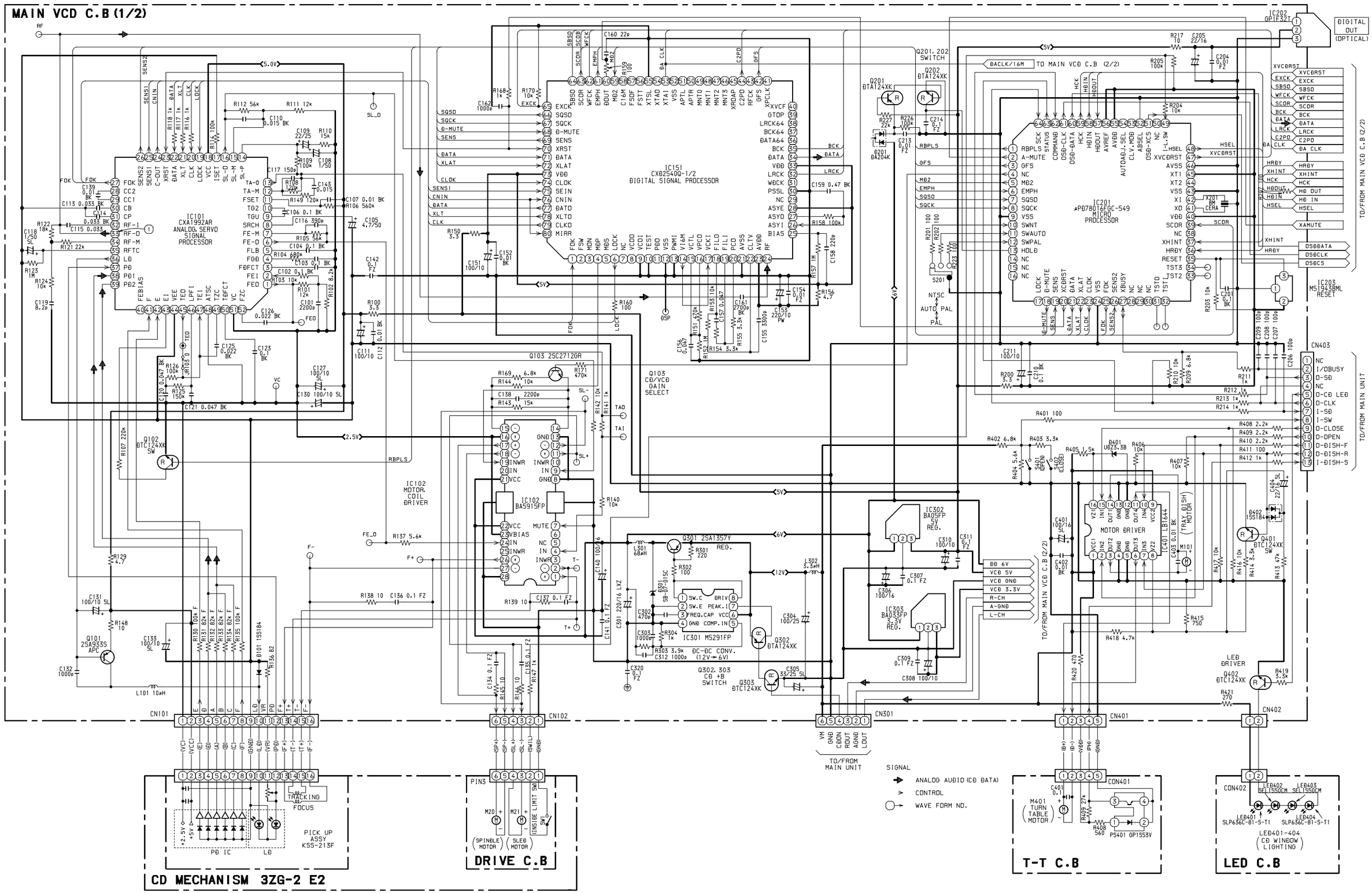

TO MAIN UNIT
TO ÐRIVE C.B
TO PICK UP ASSY
TO MAIN UNIT
CN403
CN102
CN101
CN301
CN402
IC505
IC201
IC401
IC202
IC102
S401
S402
S201 NTSC AUTO PAL PAL
J501 VIÐEO OUT
ÐIGITAL OUT (COAXIAL)
M101 (TRAY MOTOR)
TO T-T C.B
MAIN C.B VCÐ (CONÐUCTOR SIÐE)
LEÐ C.B
LEÐ401-404 (CÐ WINÐOW LIGHTING)
LEÐ 401
LEÐ 402
LEÐ 403
LEÐ 404
CON402

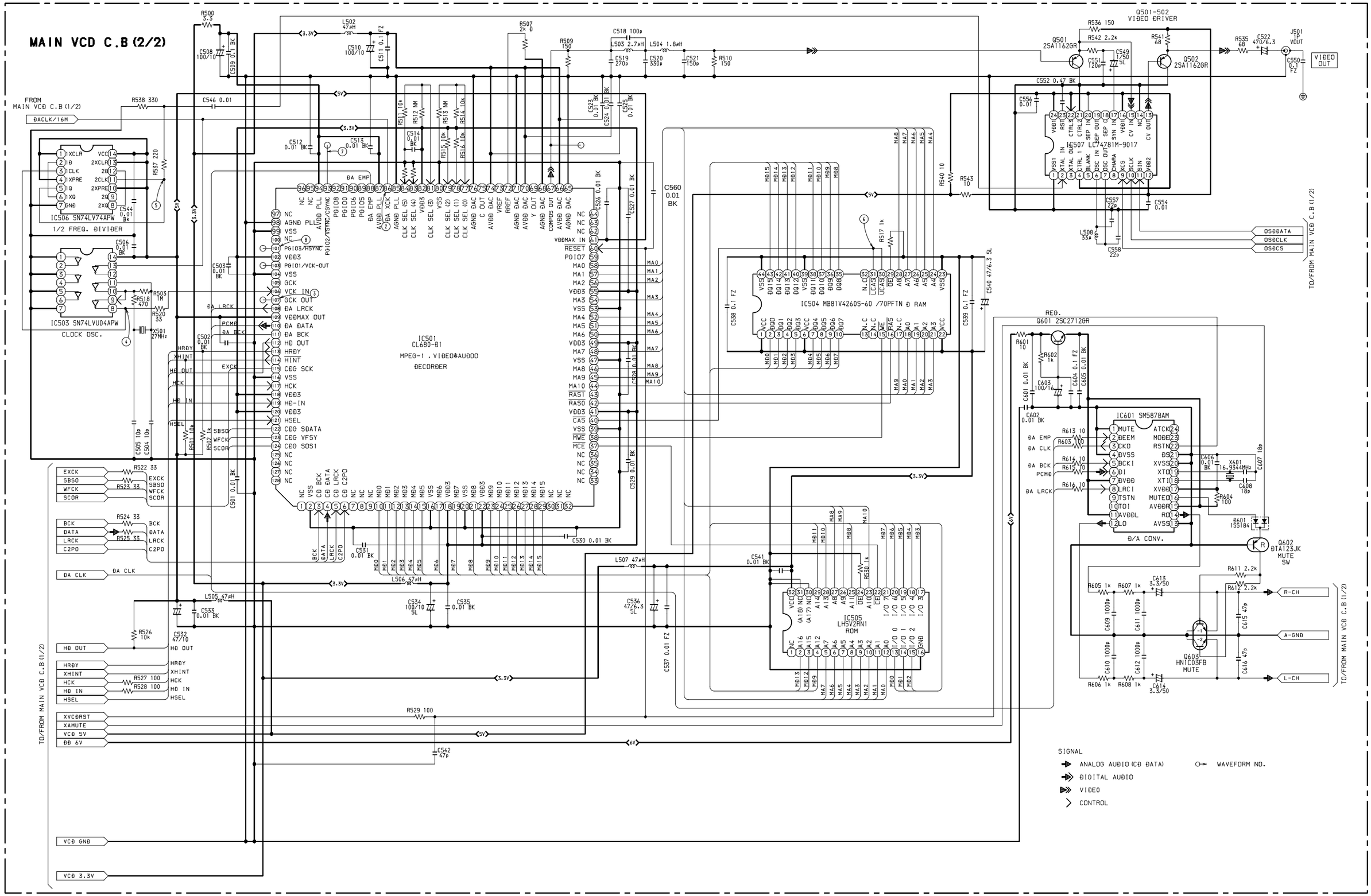


MAIN VCÐ C.B (COMPONENT SIÐE)


FROM
MAIN UNIT
FC4
5
1
T-T C.B
CON
401
4
2
5
3
1
PS401
R409
R408
C401
(RED)
(BLK)
M401
(TURN TABLE
MOTOR)
M
PICK UP ASSY
CON1
MAIN VCD C.B
CN101
DRIVE C.B
M20
(SPINDLE
MOTOR)
SW1
(INSIDE LIMIT
SW)
SW1
M21
(SLED
MOTOR)
PIN3
1
2
3
4
5
6
MAIN VCD C.B
CN102

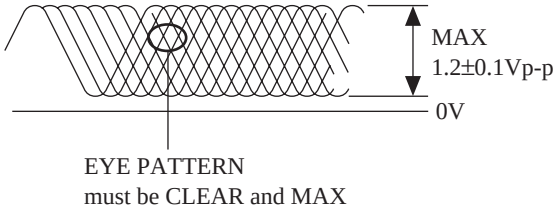
SCHEMATIC DIAGRAM-1




MAIN VCD C.B (2/2)
FROM MAIN VCD C.B (1/2)
ÐACLK/16M
IC506 SN74LV74APW
1/2 FREQ. ÐIVIÐER
IC503 SN74LVU04APW
CLOCK OSC.
X501 27MHz
IC501 CL680-Ð1
MPEG-1 . VIÐEO&AUÐIO ÐECORÐER
IC504 MB81V4260S-60 /70PFTN Ð RAM
IC505 LH5V2RN1 ROM
IC507 LC74781M-9017
Q501-502 VIÐEO ÐRIVER
Q501 2SA1162GR
Q502 2SA1162GR
REG. Q601 2SC2712GR
IC601 SM5878AM
Ð/A CONV.
Q602 ÐTA123JK MUTE SW
Q603 HN1C03FB MUTE
D601 1SS184
VIÐEO OUT
TO/FROM MAIN VCÐ C.B (1/2)
TO/FROM MAIN VCÐ C.B (1/2)
OSÐÐATA
OSÐCLK
OSÐCS
R-CH
A-GNÐ
L-CH
SIGNAL
ANALOG AUÐIO (CÐ ÐATA)
ÐIGITAL AUÐIO
VIÐEO
CONTROL
WAVEFORM NO.

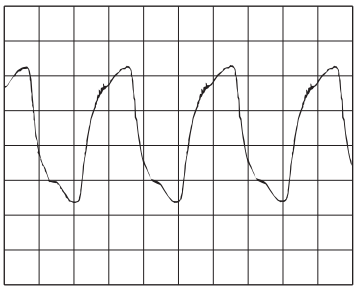
WAVE FORM

① IC101 Pin ㉝ (RF-O)
VOLT/DIV: 200mV
TIME/DIV: 0.5µS

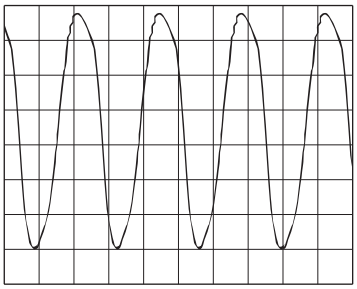


EYE PATTERN
must be CLEAR and MAX

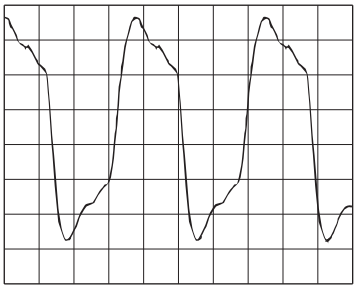
② IC501 Pin ㊽ DA XCK
16.93MHz
VOLT/DIV: 1V
TIME/DIV: 20nS



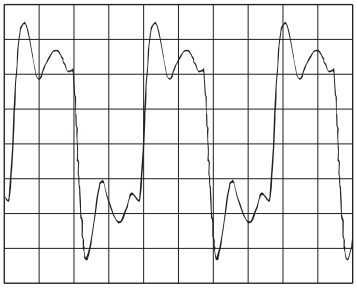
③ IC501 Pin ⑩⑦ GCK OUT
42.3MHz
VOLT/DIV: 1V
TIME/DIV: 10nS



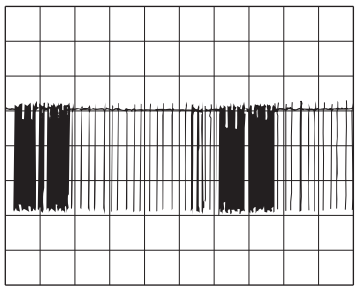
④ IC503 Pin ⑧ 33 VCK
27MHz±1.35kHz
VOLT/DIV: 1V
TIME/DIV: 10nS



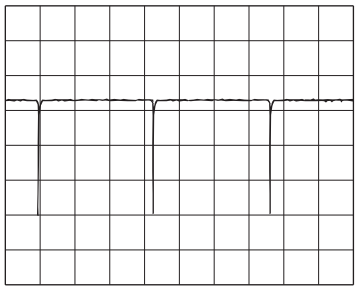
⑤ IC506 Pin ⑪ OSD CLK
13.5MHz±675Hz
VOLT/DIV: 1V
TIME/DIV: 20nS



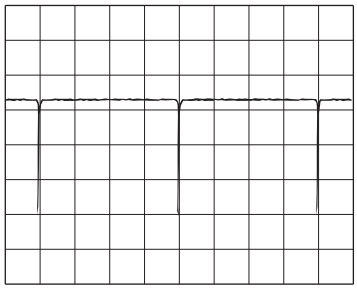
⑥ IC504 Pin ㉚ $\overline{\text{UCAS}}$
(Pin ㉛ $\overline{\text{LCAS}}$)
VOLT/DIV: 1V
TIME/DIV: 2µS



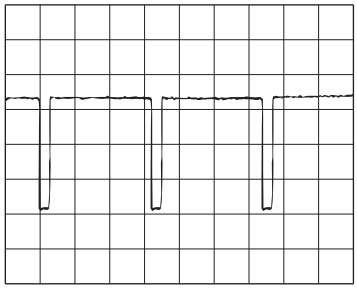
⑦ IC501 Pin ㉝ $\overline{\text{VSync}}$
NTSC
VOLT/DIV: 1V
TIME/DIV: 5mS



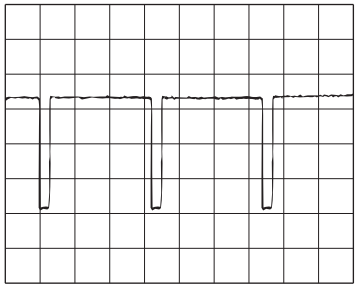
⑧ IC501 Pin ㉝ $\overline{\text{VSync}}$
PAL
VOLT/DIV: 1V
TIME/DIV: 5mS



⑧ IC501 Pin ⑩① $\overline{\text{HSync}}$
PAL
VOLT/DIV: 1V
TIME/DIV: 20µS



IC501 Pin ⑩① $\overline{\text{HSync}}$
NTSC
VOLT/DIV: 1V
TIME/DIV: 20µS



IC DESCRIPTION

IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.

Pin No.	Pin Name	I/O	Description
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier.
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC, CXD2540Q

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output.
3	MON	O	Spindle motor on/off control output.
4	MDP	O	Spindle motor servo control.
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC		
8	VCOO	O	Analog EFM PLL oscillation circuit output.
9	VCOI	I	Analog EFM PLL oscillation circuit input. fLOCK=8.6436MHz.
10	TEST	I	TEST pin.
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS		GND.
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS		Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD		Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC		
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output.
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs.
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD		Power supply (5V).
34	DA16	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two's complement, MSB first) when PSSL=0.
35	DA15	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DA14	O	DA14 output when PSSL=1. 64-bit slot serial data (two's complement, LSB first) when PSSL=0.
37	DA13	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.
38	DA12	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.

Pin No.	Pin Name	I/O	Description
39	DA11	O	DA11 output when PSSL=1. GTOP output when PSSL=0.
40	DA10	O	DA10 output when PSSL=1. XUGF output when PSSL=0.
41	DA09	O	DA09 output when PSSL=1. XPLCK output when PSSL=0.
42	DA08	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	DA07	O	DA07 output when PSSL=1. RFCK output when PSSL=0.
44	DA06	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	DA05	O	DA05 output when PSSL=1. XRAOF output when PSSL=0.
46	DA04	O	DA04 output when PSSL=1. MNT3 output when PSSL=0.
47	DA03	O	DA03 output when PSSL=1. MNT2 output when PSSL=0.
48	DA02	O	DA02 output when PSSL=1. MNT1 output when PSSL=0.
49	DA01	O	DA01 output when PSSL=1. MNT0 output when PSSL=0.
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used.
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used.
52	VSS		GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output.
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54.
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54.
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level metter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD		Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.
76	CNIN	I	Track jump count signal input.

Pin No.	Pin Name	I/O	Description
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136μ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

IC, CL680

Pin No.	Pin Name	I/O	Description
1	NC	—	No connection.
2	VSS	—	GND.
3	CD BCK	I	Bit clock input from CD DSP.
4	CD DATA	I	Data input from CD DSP.
5	CD LRCK	I	LRCK input from CD DSP.
6	CD C2PO	I	C2 pointer input from CD DSP.
7-9	NC	—	No connection.
10-15	MD0-MD5	I/O	DRAM/ROM interface. (DATA)
16	VSS	—	Ground.
17	MD6	I/O	DRAM/ROM interface. (DATA)
18	VDD3	—	Power supply 3.3V.
19	MD7	I/O	DRAM/ROM interface. (DATA)
20	VSS	—	Ground.
21	MD8	I/O	DRAM/ROM interface. (DATA)
22	VDD3	—	Power supply 3.3V.
23-29	MD9-MD15	I/O	DRAM/ROM interface. (DATA)
30-36	NC	—	No connection.
37	$\overline{\text{MCE}}$	—	ROM chip enable.
38	$\overline{\text{MWE}}$	O	DRAM write enable.
39	VSS	—	Ground.
40	$\overline{\text{CAS}}$	O	DRAM/ROM interface.
41	VDD3	—	Power supply 3.3V.
42	$\overline{\text{RASO}}$	O	DRAM/ROM interface.
43	$\overline{\text{RASI}}$	O	
44-46	MA10-MA8	O	DRAM/ROM interface. (Address)
47	VSS	—	Ground.
48	MA7	O	DRAM/ROM interface. (Address)
49	VDD3	—	Power supply 3.3V.
50-52	MA6-MA4	O	DRAM/ROM interface. (Address)
53	VSS	—	Ground.
54	MA3	O	DRAM/ROM interface. (Address)
55	VDD3	—	Power supply 3.3V.
56-58	MA2-MA0	O	DRAM/ROM interface. (Address)
59	PGIO7	I/O	Programmable I/O.
60	$\overline{\text{RESET}}$	I	Reset input.
61	VDD MAX IN	—	Power supply - VDDMAX. (5.0V)
62-64	NC	—	No connection.
65	AGND DAC	—	Analog ground.
66	A DAC	—	Analog power supply (DAC) : 3.3V.
67	COMP OUT	O	Composite out.
68	AGND DAC	—	Analog ground.

Pin No.	Pin Name	I/O	Description
69	Y OUT	O	Video signal “Y” OUT.
70	AVDD DAC	—	Analog power supply (DAC) 3.3V.
71	AGND DAC	—	Analog ground.
72	R REF	I	Reference resistor input.
73	V REF	I	Voltage reference input.
74	AVDD DAC	—	Analog power supply (DAC) : 3.3V.
75	C OUT	O	Video signal “C” out.
76	AGND DAC	—	Analog ground.
77-79	CLK SEL0-2	I	Clock selection input.
80	VSS	—	Ground.
81	CLK SEL3	I	Clock selection input.
82	VDD3	—	Power supply 3.3V.
83, 84	CLK SEL4, 5	I	Clock selection input.
85	AGND PLL	—	Analog ground.
86	DA XCK	I	DA XCK (16.933MHz) input.
87	AVDD PLL	—	Analog power supply 3.3V.
88	DA EMP	O	DAC-emphasis output.
89, 90	PGIO5, O6	I/O	Programmable I/O.
91	PGIO0	I/O	
92	PGIO8	I/O	
93	$\overline{\text{VSYNC}}/\overline{\text{CSYNC}}$	O	$\overline{\text{VSYNC}}/\overline{\text{CSYNC}}$ output.
94	AVDD PLL	—	Analog power supply (PLL) 3.3V.
95	VID_DAC_CK	O	Video DAC clock.
96	PROC_CK	O	Processor clock.
97	AUD_XCK	O	Audio XCK.
98	AGND PLL	—	Analog ground.
99	VSS	—	Ground.
100	NC	—	No connection.
101	$\overline{\text{HSYNC}}$	O	$\overline{\text{HSYNC}}$ output.
102	VDD3	—	Power supply 3.3V.
103	VCK OUT	O	VCK out.
104	VSS	—	Ground.
105	GCK	I	Global clock signal input. (42.3MHz)
106	VCK	I	Video clock signal input. (27.0MHz)
107	GCK OUT	O	Global clock signal output. (27.0MHz)
108	DA LRCK	O	DAC-LRCK output.
109	VDD MAX OUT	—	Power supply (VDD MAX) : 5.0V.
110	DA DATA	O	DAC-PCM data output.
111	DA BCK	O	DAC-BIT clock output.
112	HD OUT	O	Micon interface. (Data out)
113	HRDY	O	Micon interface. (Host ready)

Pin No.	Pin Name	I/O	Description
114	$\overline{\text{HINT}}$	O	Micon interface. (Host interrupt)
115	CDG SCK	I	CD-G serial clock input.
116	VSS	—	Ground.
117	HCK	I	Micon interface. (Host clock)
118	VDD3	—	Power supply 3.3V.
119	HD IN	I	Micon interface. (Host data in)
120	VDD3	—	Power supply 3.3V.
121	HSEL	I	Micon interface. (Host select in)
122	CDG DATA	I	CD-G data input.
123	CDG VFSY	I	CD-G VFSY input.
124	CDG SOSI	I	CD-G SOSI input.
125	DSP-XCK	O	DSP-XCK output.
126-128	NC	—	No connection.

IC, LC74781M

Pin No.	Pin Name	I/O	Description
1	VSS1	—	GND connection terminal. (Digital ground terminal).
2	Xtal IN	I	External X'tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc).
3	Xtal OUT	O	
4	CTRL1	I	Either the external clock input mode or the X'tal generator mode is selected by this selector terminal. L: X'tal generator mode, H: External clock input.
5	BLANK	O	Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H.) When reset ($\overline{RST}$ terminal = L), the X'tal clock signal is output. (It is not output when reset by the reset command).
6	OSC IN	I	External coil and capacitor for the character output dot clock generator are connected to this terminal.
7	OSC OUT	O	
8	CHARA	O	The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output.) When reset ($\overline{RST}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command).
9	$\overline{CS}$	I	Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input).
10	SCLK	I	Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input).
11	SIN	I	Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input).
12	VDD2	—	Power supply for the composite video signal level adjustment. (Analog power supply).
13	CV OUT	O	Composite video signal output terminal.
14	NC	—	Connected to GND or not connected.
15	CV IN	I	Composite video signal input terminal.
16	VDD1	—	Power supply (+5V digital power supply).
17	SYN IN	I	Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal).
18	SEP C	—	Internal sync separator circuit bias voltage monitoring terminal.
19	SEP OUT	O	The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode.) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal).
20	SEP IN	I	The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connected to VDD1.
21	CTRL2	I	When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.

Pin No.	Pin Name	I/O	Description
22	CTRL3	I	Controls whether or not to input the $\overline{\text{VSYNC}}$ signal to the SEPIN input. L: to input the $\overline{\text{VSYNC}}$ signal. H: not to input the $\overline{\text{VSYNC}}$ signal.
23	$\overline{\text{RST}}$	I	System reset input terminal. Pull-up resistor is built-in. (Hysteresis input).
24	VDD1	—	Power supply. (+5V digital power supply).

IC, µPD78016FGC

Pin No.	Pin Name	I/O	Description
1	RBPLS	O	RADIAL BALANCE PLUS.
2	AMUTE	O	AUDIO ANALOG MUTE (H=MUTE ON).
3	GFS	I	GFS.
4	XVCDMD	I	AUDIO/VIDEO CD MODE (L=VCD=SPINDLE GAIN UP).
5	MD2	O	DOUT MUTE CONT.
6	EMPH	I	EMPHASIS.
7	SQSO	I	SQDATA FROM CD.
8	SQCK	O	SQCLK TO CD.
9	VSS	—	GND.
10	SWNT	I	SW TV OUT MODE (L=NTSC).
11	SWAUTO	I	SW TV OUT MODE (L=NTSC/PAL AUTO).
12	SWPAL	I	SW TV OUT MODE (L=PAL).
13	EMERG	I	POWER EMERGENCY STOP (L*3sec=STOP).
14	NC	—	Nou used.
15	LPCSEL	I	“LPC ON/OFF (H=ON, NORMAL)”.
16	NC	—	Nou used.
17	LOCK	O	GFS (FRAME SYNC) LOCK (NO USE=H).
18	DMUTE	O	DIGITAL DATA OUT MUTE.
19	SENS	I	DSP SENS1 FROM CD.
20	XCDRST	O	CD RESET.
21	DATA	O	DATA TO CD.
22	XLAT	O	XLT TO CD.
23	CLOK	O	CLK TO CD.
24	VSS	—	GND.
25	FOK	I	FOCUS OK.
26	SENS2	I	SSP SENS2 FROM CD.
27	XBUSY	I/O	READY/BUSY I/O TO HOST OD.
28	NC	—	Nou used.
29	NC	—	
30	NC	—	
31	TST0	I/O	CHECK LAND.
32	TST1	I/O	
33	TST2	I/O	
34	TST3	I/O	
35	RESET	I	RESET.
36	HRDY	I	HRDY FROM CL680.
37	XHINT	I	HINT FROM CL680.
38	NC	—	Nou used.
39	SCOR	I	SCOR FROM CD.
40	VDD	—	5.0VDD.
41	XO	O	8.0MHz CERALOCK.

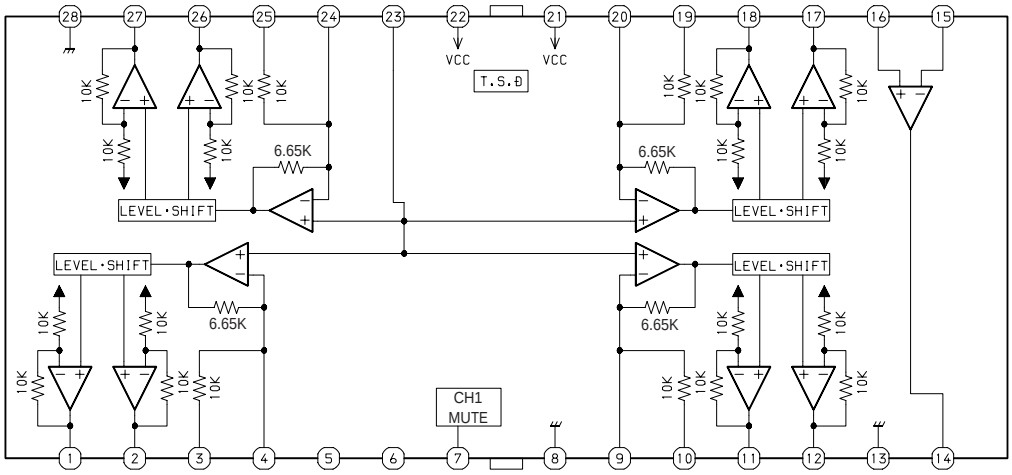
Pin No.	Pin Name	I/O	Description
42	XI	I	8.0MHz CERALOCK.
43	VSS	—	GND.
44	XT2	—	Nou used.
45	XT1	I	5.0VDD.
46	AVSS	—	GND.
47	XMPGRST	O	MPEG BLOCK IC RESET.
48	HSEL	O	ADDRESS/DATA SEL TO CL680.
49	INLSW	I	INSIDE LIMIT SW.
50	NC	—	Nou used.
51	OSDXCS	O	OSD CHIP SELECT.
52	ABSEL	I	CXA1992A/B SELECT (L=CXA1992A).
53	CLVSEL	I	CLV MODE SELECT (H=CLV-N).
54	AADSEL	I	AUTO ADJUST SELECT (H=AUTO ON).
55	AVDD	—	5.0VDD.
56	AVREF	—	
57	HDOUT	I	HD-OUT FROM CL680.
58	HDIN	O	HD-IN TO CL680.
59	HCK	O	HCK TO CL680.
60	OSDDATA	O	OSD DATA.
61	OSDCLK	O	OSD CLOCK.
62	COMMAND	I	COMMAND FROM HOST.
63	STATUS	O	STATUS TO HOST.
64	SCK	I	SCK FROM HOST.

IC, SM5878M

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H).
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	CKO	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. (“H” or open during normal operation)
10	TO1	O	Test output 1. (Normally low level output).
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X’tal system VDD terminal.
18	XTI	I	X’tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X’tal oscillator terminal.
20	XVSS	—	X’tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H).
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H).
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H).

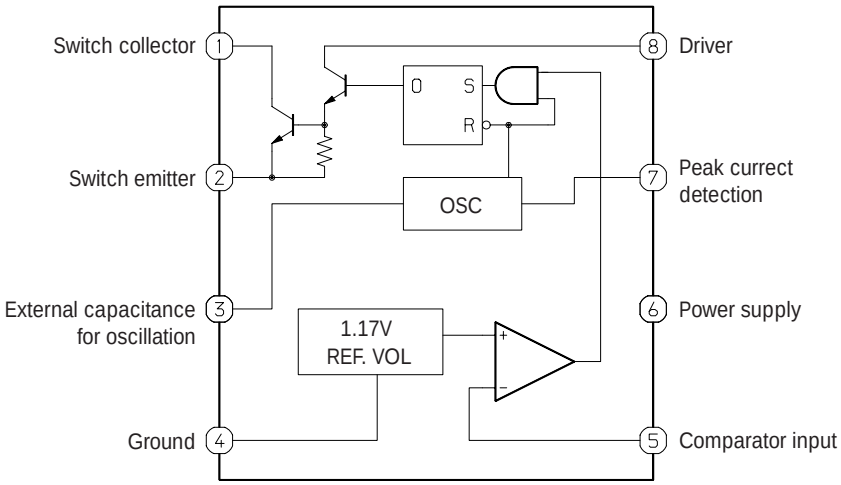
IC BLOCK DIAGRAM

IC, BA5915FP

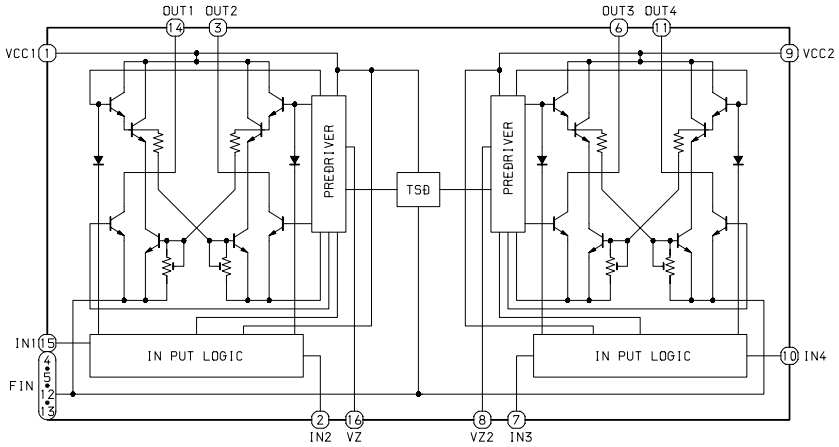


T.S.D: Thermal shut-down
Resistors are in units of Ω.

IC, M5291FP



IC, LB1644



TRUH TABLE

IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
0	0	L	L	0	0	L	L
1	0	H	L	1	0	H	L
0	1	L	H	0	1	L	H
1	1	L	L	1	1	L	L

INPUT			OUTPUT				MODE	
IN1	IN2.3	IN4	OUT1	OUT2	OUT3	OUT4	M1	M2
0	0	0	L	L	L	L	BRAKE	BRAKE
1	0	0	H	L	L	L	FF/REW	BRAKE
0	1	1	L	H	L	L	REW/FF	BRAKE
1	1	0	L	L	H	L	BRAKE	FF/REW
0	0	1	L	L	L	H	BRAKE	REW/FF
1	1	1	L	L	L	L	BRAKE	BRAKE

TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the function CD button.
   All FL display tubes will light up, and the test mode will be activated.

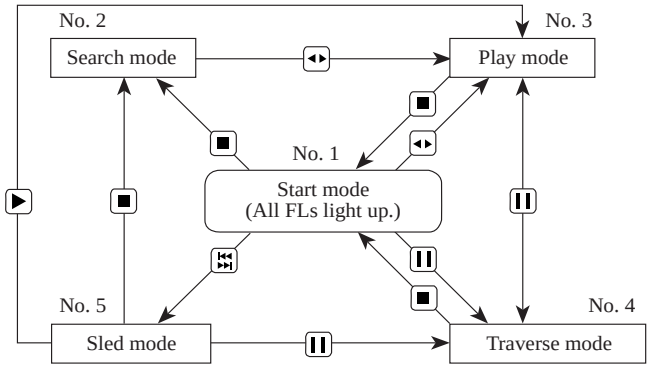
2. How to Cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   - Press the function button. (except CD function button)
   - Press the power switch button.
   - Disconnect the AC plug

3. CD Test Mode Functions
   When test mode is activated, the following mode functions from No.1 to No.5 can be used by pressing the operation keys.

Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	TEST□□ □□ □□ Flashes repeatdly	• Test mode is activated. • CD block power is ON.	• Test mode
Search mode No.2	■ key		• Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀▶key		• Normal playback • Focus search is continued if TOC cannot be read. * NOTE 1	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check FOK/FZC
Traverse mode No.4	⏸ key		• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON/OFF Tracking balance (traverse) check
Sled mode No.5	⏮key ⏭	All lamps light	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

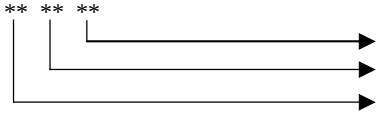
* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.
* NOTE 2: Do not press the ⏮ or ⏭ keys when the machine is in the ⏸ status is active. If they are pressed, playback will not be possible after the ⏸ status has been canceled. If the ⏮ or ⏭ keys are pressed in the ⏸ status, press the ■ key and return to the start mode (No.1).
* NOTE 3: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

4. Operation Outline
   The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



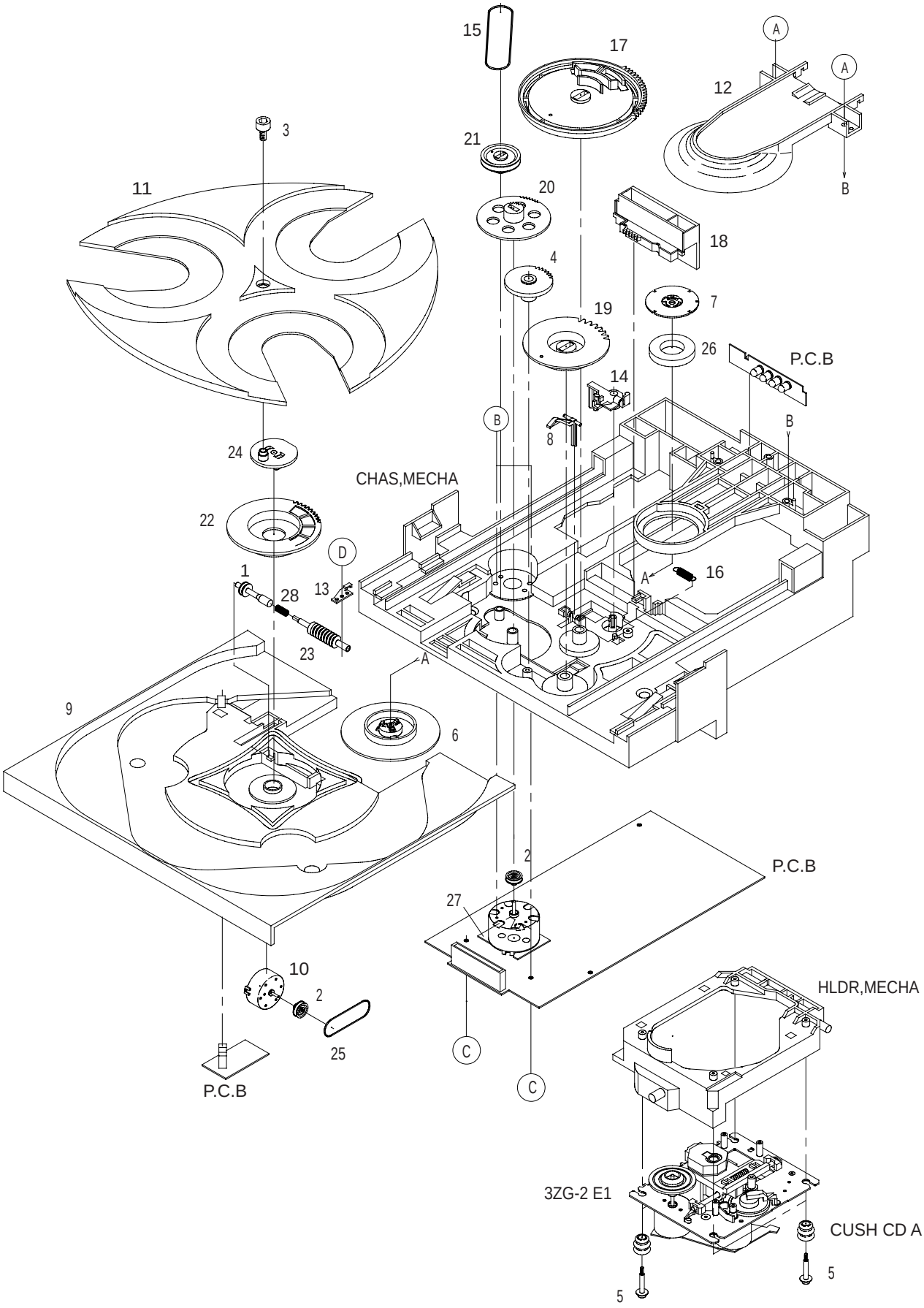
   If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

5. How to check the Automatic Adjustment Values
   The automatic adjustment values can be checked by pressing the square (■) button.
   FL display (displayed in hexadecimal values)



Note) The reference value is “20 08 08”.

MECHANICAL EXPLODED VIEW 1/1

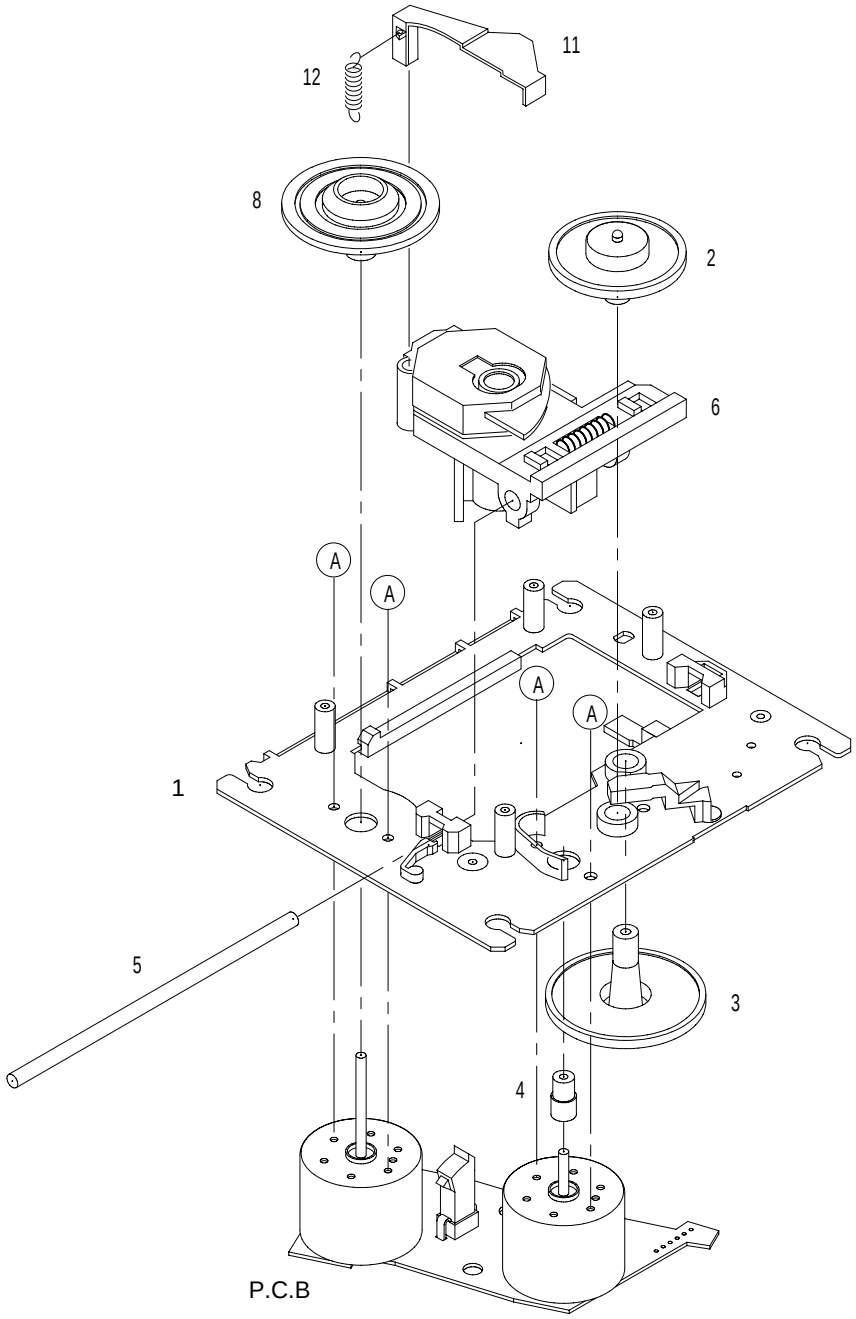


MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-239-210		PULLY,WORM N
2	84-ZG1-267-010		PULLEY,LOAD MO 8
3	81-ZG1-239-010		S-SCREW,TT
4	81-ZG1-291-110		GEAR,TRAY RELAY NO3
5	81-ZG1-271-010		S-SCREW MECH REAR
6	81-ZG1-277-310		HLDR,MAGNET N
7	81-ZG1-255-110		PLATE,MAGNET MK2
8	83-ZG3-213-010		LVR,SW
9	84-ZG1-003-310		TRAY,NO2-B
10	87-045-364-010		MOTOR(BCH3B14)
11	84-ZG1-005-210		TURNTABLE,NO1(*)
12	84-ZG1-011-010		REFLECTOR,CD
13	84-ZG1-259-010		SPR-P,WORM
14	84-ZG1-208-210		LEVER,CAM
15	84-ZG1-209-010		BELT,SQ1.8-117.7
16	84-ZG1-211-010		SPR-E CAM S
17	84-ZG1-215-410		GEAR,MAIN CAM BLU
18	84-ZG1-216-310		SLIDE,MECHA CAM YEL
19	84-ZG1-205-110		GEAR,TRAY
20	84-ZG1-206-110		GEAR,RELAY
21	84-ZG1-207-010		PULLEY,RELAY
22	84-ZG1-221-010		GEAR,MAIN TT
23	84-ZG1-238-010		GEAR,WORM N
24	84-ZG1-224-010		LEVER,TT
25	84-ZG1-225-010		BELT,SQ1.0-63.3
26	83-ZG3-602-010		RING,MAG
27	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
28	84-ZG1-248-010		SPR-C,WORM
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-251-070-410		U+2.6-3
C	87-342-036-210		UT2+2-8
D	87-067-981-010		BVT2+3-6 BLK

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E1)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E1)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

CX-NAK572
CX-NK270
CX-NK290
CX-NK370
CX-NK570
CX-NK765
CX-NK770
CX-NK970
DX-SNKH100

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G一　一	
G一　一	
G一　一	

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